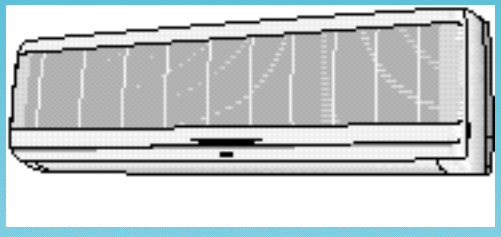
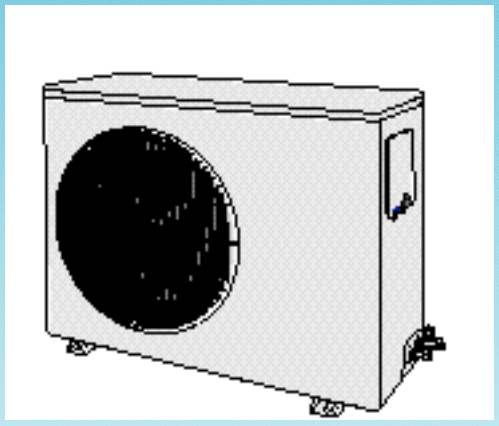
ROOM AIR CONDITIONER

INDOOR	OUTDOOR
AQT24A1(2)RE/B	UQT24A1(2)RE/B
AQT18A1(2)RE/B	UQT18A1(2)RE/B
AQ18A1(2)RE	UQ18A1(2)RE
SH24TA1	SH24TA1X
SH18TA1	SH18TA1X
SH18ZA1	SH18ZA1X

SERVICE Manual

AIR CONDITIONER





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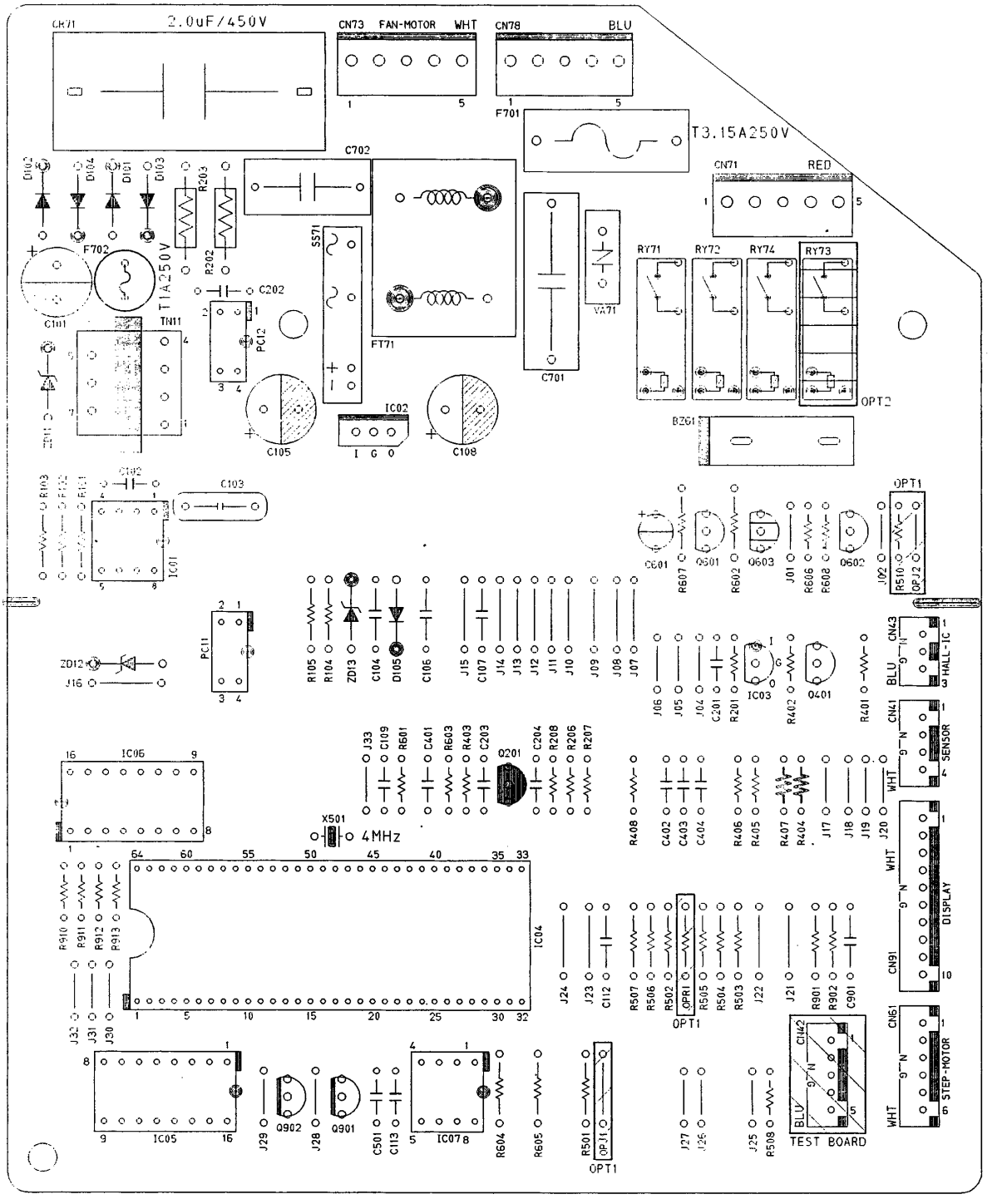
8. PCB Diagrams

8-1 Main PCB

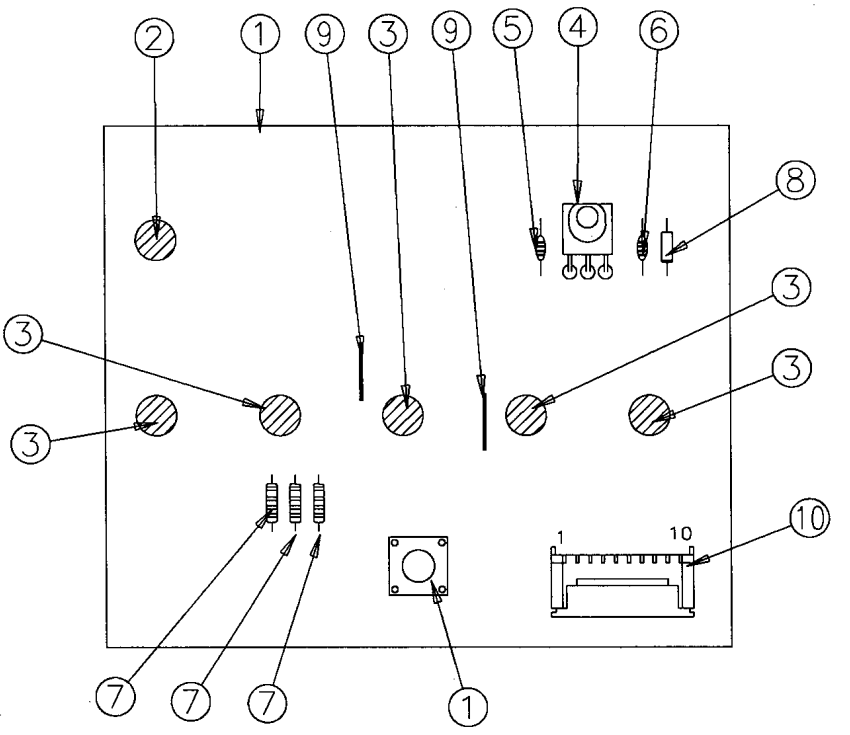


■ Parts List

No	DESIGN LOCATION	PART CODE NO	Description	Specification
1	F701	DE32-10037A	FUSE	FST 250V 3.15A
2	F701,F101	DE47-40024A	HOLDER-FUSE	FH-51H 7.5A
6	IC02	DE13-10016A	IC-VOLT REGU	KA7805A
7	CR71		C-FILM	CQS 450V 2.0µF
8	FT71		FILTER NOISE	LSAO5230P 250V~2A 23mH*2
9	R104,105	2001-000776	R-CARBON	RD 1/4 TP 221-J
10	R102,103	2001-000588	R-CARBON	RD 1/8 TP 334-J
11	R501~510,R206,R601,R606,R902	2001-000065	R-CARBON	RD 1/8 TP 103-J
12	R405,406	2001-000036	R-CARBON	RD 1/8 TP 331-J
13	R201,207,208,401,408,603,608	2001-000042	R-CARBON	RD 1/8 TP 102-J
14	R607	2001-000855	R-CARBON	RD 1/4 TP 561-J
15	R602	2001-001088	R-CARBON	RD 1/2 T(S) 102-J
16	R402	2001-000890	R-CARBON	RD 1/8 TP 682-J
17	R910,911,912,913	A1000-0244	R-CARBON	RD 1/8 TP 332-J
18	R404,407	2004-001137	R-METAL FILM	RD 1/8 TP 682-F
19	D101~105	0402-000137	DIODE-RECT	1N4007
20	SS71	B4190-0016	THYRISTOR	G3MB-202PL
21	BZ61	DE30-20016A	BUZZER	CBE 2220BA STICK
22	C203,204,401	2202-000783	C-CERAMIC	CA OA 50V 103Z
23	C404	2202-000796	C-CERAMIC	CA OA 50V 102Z
24	C104,102,106,107,109,112,113,201,202,402,403	2202-000780	C-CERAMIC	CA OA 50V 104Z
25	C105	2401-000710	C-ELEC	CE04 25V 102-M
26	C108	2401-001397	C-ELEC	CE 04 25V 471-M
28	C601	2401-001573	C-ELEC	47/50V
29	IC04	DE09-10149A	IC-MCU	µPD780024CW
30	IC03	DE13-20009A	IC	KA7533Z
31	X501	2802-000103	RSONATOR-CERAMIC	4MHz
32	IC05,IC06	DE13-20024A	IC-DRIVE	KID65003AP
33	Q401,601,602	A4050-0168	TR-GENERAL	KSC945Y
34	Q603	0501-000292	TRANSISTOR	A708Y
35	Q902,Q901,Q201	0504-000144	TRANSISTOR	R2002
37	CN73	3711-000262	CONNECTOR WAFER	YW396-05AV WHT
38	CN43	3711-000879	CONNECTOR WAFER	SMW250-03 BLU
39	CN41	3711-000940	CONNECTOR WAFER	SMW250-04 WHT
40	CN61	3711-001038	CONNECTOR WAFER	SMW250-06 WHT
42	CN71		CONNECTOR WAFER	YW396-05AV RED
43	CN91	3711-001154	CONNECTOR WAFER	SMW250-10 WHT
44	RY72,RY73,RY71,RY74	3501-001154	RELAY	FTR-F3AA012E
45	J1~J35, OPJ1, OPJ2, OPJ3	DE39-60001A	WIRE SO COPER	PI0.6 SN T 52MM
46	CN78		CONNECTOR WAFER	YW396-05AV BLU
48	F702		FUSE	250V~1A
49	IC07		EEORIM	93C5L
51	C103	2305-001027	C-FILM, MPEF	222M
	R101			RD 1/4 TP 471-J
	R202,203			RD 2 TP 513-J
	ZD11	0406-001086	T.V.S	ST020-200
	IC01	1203-001813	TR switch	TNY 255P
	ZD12	0402-001297	FR-DIODE	LIG2B
	ZD13	0403-001289	Zener-3.6V	BZX55-C3V6
	PC11	0403-001290	Zener-11V	BZX55-C11
	PC12	0847-90071A	Photo-Coupler	PC817
			"	PC814

8-2 ASS'Y DISPLAY & Module

• ASS'Y DISPLAY & MODULE PCB : DB93-00311A



■ Parts List

NO	Description	Specification	CODE-NO	Q'TY
1	PBC-DISPLAY	FR-1 T1.6	DB41-00014A	1
2	LED-LAMP	SY5511(YEL)	0601-001059	1
3	LED-LAMP	SO5511(ORG)	0601-001196	5
4	MODULE REMOCON	PNA4612MOOHB	DB32-00017A	1
5	C-CERAMIC	CA OA 50V 102Z	2201-000283	1
6	C-CERAMIC	CA OA 50V 104Z	2202-000780	1
7	R-CARBON	RD 1/4 TP 471-J	-	3
8	DIODE SWITCHING	1N4148	0401-000005	1
9	JUMP-WIRE	10mm	-	2
10	CONNECTOR WAFER	SMAW200-10P	-	1

1. Precautions

1. Warning: Prior to repair, disconnect the power cord from the circuit breaker.

2. Use proper parts: Use only exact replacement parts. (Also, we recommend replacing parts rather than repairing them.)

3. Use the proper tools: Use the proper tools and test equipment, and know how to use them. Using defective tools or test equipment may cause problems later-intermittent contact, for example.

4. Power Cord: Prior to repair, check the power cord and replace it if necessary.

5. Avoid using an extension cord, and avoid tapping into a power cord. This practice may result in malfunction or fire.

6. After completing repairs and reassembly, check the insulation resistance. Procedure: Prior to applying power, measure the resistance between the power cord and the ground terminal. The resistance must be greater than 30 megohms.

7. Make sure that the grounds are adequate.

8. Make sure that the installation conditions are satisfactory. Relocate the unit if necessary.

9. Keep children away from the unit while it is being repaired.

10. Be sure to clean the unit and its surrounding area.

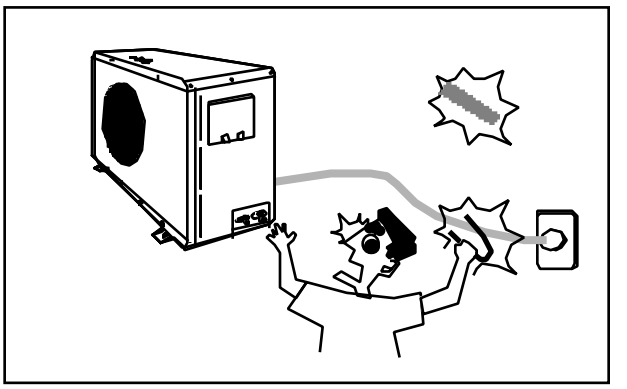


Fig. 1-1 Avoid Dangerous Contact

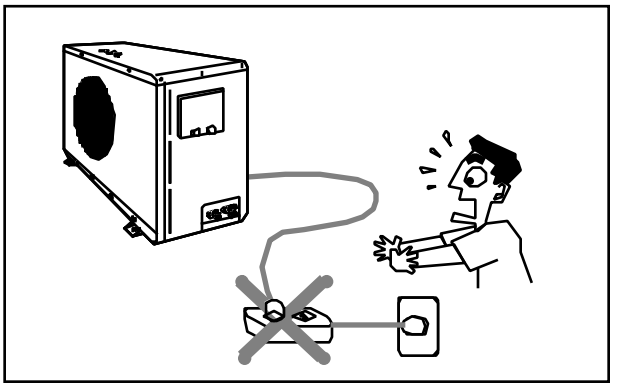


Fig. 1-2 No Tapping and No Extension Cords

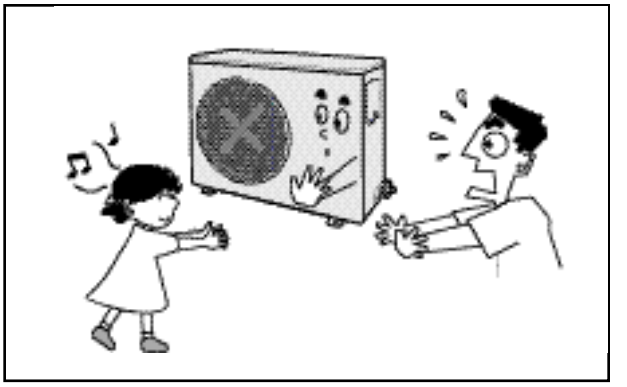


Fig. 1-3 No Kids Nearby!

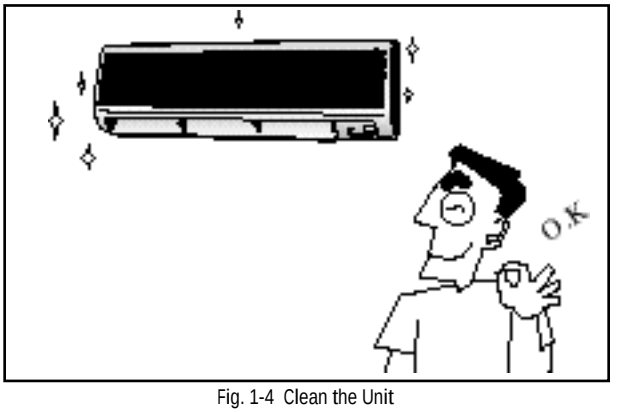


Fig. 1-4 Clean the Unit

MEMO

2. Product Specifications

2-1 Table

Item			Model	AQT24A1RE/AQT24A2RE/SH24TA1				AQT24A1RB/AQT24A2RB				AQT18A1RE/AQT18A2RE/SH18TA1				AQT18A1RB/AQT18A2RB				AQ18A1RE/AQ18A2RE/SH18ZA1			
				Cool		Heat		Cool		Heat		Cool		Heat		Cool		Heat		Cool		Heat	
Power Sourse				220-240V~, 50Hz				220V~, 60Hz				220-240V~, 50Hz				220V~, 60Hz				220V~, 60Hz			
Perfor-mance	Capacity (ISO/SASO)		kcal/h	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW	BTU	KW
			BTU/h	24,000BTU/h	6.80KW	24,000BTU/h	6.90KW	24,000BTU/h	-	24,000BTU/h	-	18,000BTU/h	5.10KW	20,000BTU/h	5.60KW	18,000BTU/h	-	20,000BTU/h	-	18,000BTU/h	5.10	20,000BTU/h	5.60
	Air circulation (High)		m^2/min	14.0	14.0	14.5	14.5	14.0	-	14.5	-	13.0	13.0	13.5	13.5	13.0	-	13.5	-	13.5	13.5	14.0	14.0
	Moisture removal (High)		Liters/h	3.0				3.0				2.5				2.5				2.5			
Electrical Rating	Available voltage range		V	198 ~ 264				187 ~ 253				198 ~ 264				187 ~ 253				198 ~ 264			
	Running amperes		A	12.5	12.5	13.0	13.0	13.0	-	13.5	-	9.5	9.5	10.0	10.0	10.0	-	10.5	-	8.3	8.3	8.5	8.5
	Power input		kw	2.6	2.6	2.7	2.65	2.6	-	2.8	-	2.00	2.00	2.10	2.10	2.00	-	2.10	-	1.85	1.80	1.95	1.85
	Power factor		%	86.7	86.7	86.5	84.9	90.9	-	94.3	-	87.7	87.7	87.5	87.5	90.9	-	90.9	-	92.8	90.4	95.6	90.7
	Energy efficiency ratio		BTU/wh	9.2	-	8.9	-	9.2	-	8.6	-	9.0	-	9.5	-	9.0	-	9.5	-	9.7	-	10.2	-
	Compressor locked rotor amperes		A	82				73				54				52				35			
Features	Controls/Temperature control			Microprocessor / I.C Thermostat				Microprocessor / I.C Thermostat				Microprocessor / I.C Thermostat				Microprocessor / I.C Thermostat				Microprocessor / I.C Thermostat			
	Control unit			Wireless remote control				Wireless remote control				Wireless remote control				Wireless remote control				Wireless remote control			
	Timer			24-Hour ON or OFF				24-Hour ON or OFF				24-Hour ON or OFF				24-Hour ON or OFF				24-Hour ON or OFF			
	Fan speed		Indoor/Outdoor	3 Steps and Turbo / 1 Step				3 Steps and Turbo / 1 Step				3 Steps and Turbo / 1 Step				3 Steps and Turbo / 1 Step				3 Steps and Turbo / 1 Step			
	Airflow direction (indoor)		Horizontal	Manual				Manual				Manual				Manual				Manual			
			Vertical	Auto				Auto				Auto				Auto				Auto			
	Comperssor			Reciprocating(Tecumseh)				Reciprocating(Tecumseh)				Reciprocating(Tecumseh)				Reciprocating(Tecumseh)				Rotary(SAMSUNG)			
	Refrigerant/Amount charged at rating		g	R22 / 1,600g				R22 / 1,600g				R22 / 1,500g				R22 / 1,500g				R22 / 1,550g			
	Refrigerant control			Capillary tube				Capillary tube				Capillary tube				Capillary tube				Capillary tube			
	Operation sound	Indoor Hi/Me/Lc	dB-A	45 / 43 / 41				45 / 43 / 41				45 / 42 / 39				45 / 42 / 39				45 / 42 / 39			
		Outdoor-Hi	dB-A	58				58				57				57				55			
	Refrigerant tubing connections			Flare type				Flare type				Flare type				Flare type				Flare type			
	Max. allowable tubing length at shippint		m	20				20				15				15				15			
	Refrigerant tube diameter	Narrow tube	(in.)	6.35(1/4")				6.35(1/4")				6.35(1/4")				6.35(1/4")				6.35(1/4")			
		Wide tube	(in.)	15.88(5/8")				15.88(5/8")				12.70(1/2")				12.70(1/2")				12.70(1/2")			
	Refrigerant tube kit/Accessories			Optional / Hanger-plate				Optional / Hanger-plate				Optional / Hanger-plate				Optional / Hanger-plate				Optional / Hanger-plate			
Dimensions & Weight				Indoor unit		Outdoor		Indoor unit		Outdoor		Indoor unit		Outdoor		Indoor unit		Outdoor		Indoor unit		Outdoor	
	Unit dimensions	Height	mm	275		638		275		638		275		620		275		620		275		620	
		Width	mm	1080		880		1080		880		1080		787		1080		787		1080		787	
		Depth	mm	204		310		204		310		204		320		204		320		204		320	
	Package dimensions	Height	mm	372		704		372		704		372		692		372		692		372		692	
		Width	mm	1151		1032		1151		1032		1151		909		1511		909		1151		909	
		Depth	mm	277		413		277		413		277		444		277		444		277		444	
	Weight	Net	kg	13		63		13		63		13		58		13		58		13		46	
		Shipping	kg	16		67		16		67		16		62		16		62		16		50	

Remarks : Rating Conditions are :

Indoor air temperature ISO(50Hz) : 27˚C DB/19.0˚C WB, ISO(60Hz) : 27.0˚C DB/19.5˚C WB

Outdoor air temperature ISO : 35.0˚C DB/24.0˚C WB

2-2 Major Component specifications

■ Indoor unit

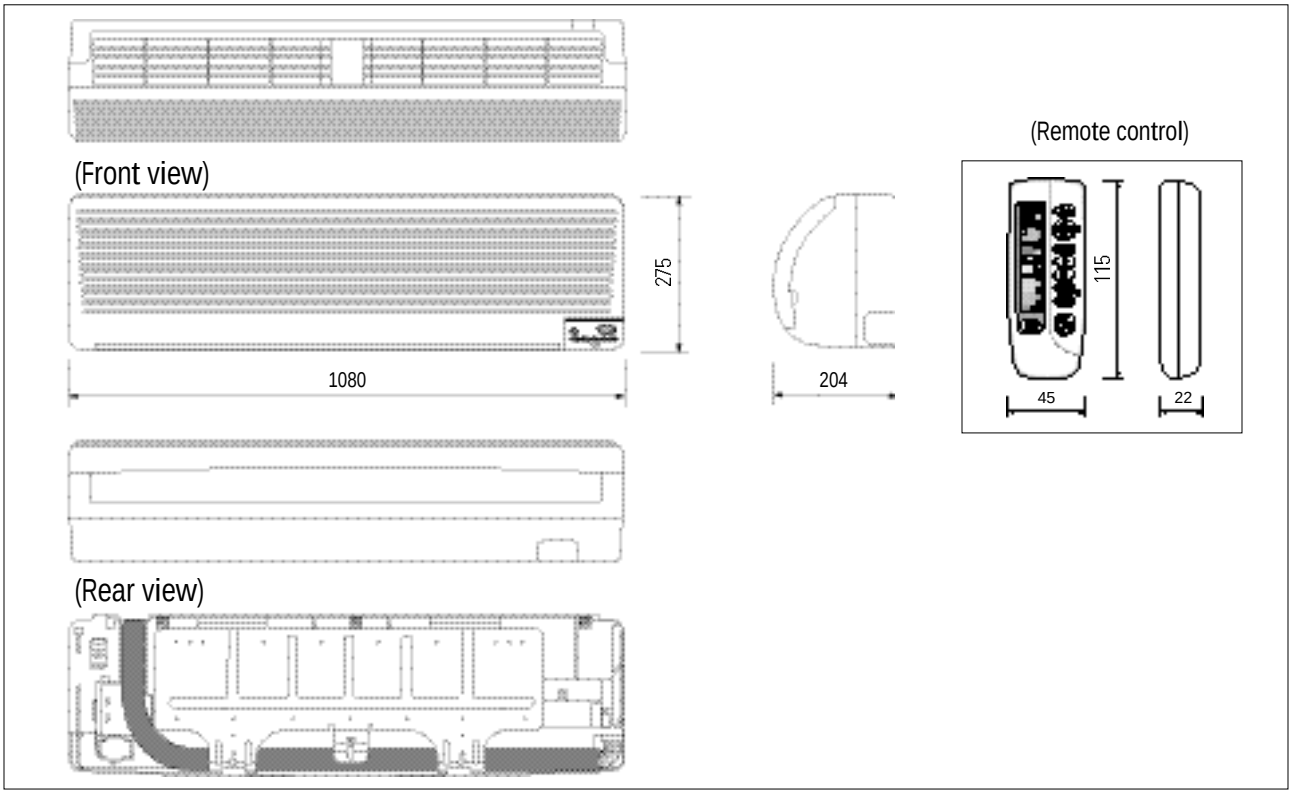
Model				AQT24A1RE/AQT24A2RE/SH24TA1	AQT24A1RB/AQT24A2RB	AQT18A1RE/AQT18A2RE/SH18TA1	AQT18A1RB/AQT18A2RB	AQ18A1RE/AQ18A2RE/SH18ZA1
PCB	Part No.			PD-T24A1R-00	PD-T24A1R-00	PD-T24A1R-00	PD-T24A1R-00	PD-T24A1R-00
	Controls			Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
	Control circuit fuse			250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A	250V, 3.15A
Fan & Fan Motor	Type			Cross-Flow	Cross-Flow	Cross-Flow	Cross-Flow	Cross-Flow
	Dia. and length		mm	ø95/L = 842	ø95/L = 842	ø95/L = 842	ø95/L = 842	ø95/L = 842
	Fan motor model			IC-9430SKC7A	IC-9430SKC7A	IC-9430SKC7A	IC-9430SKC7A	IC-94309KC7A
	Pols,rpm(at 240V)			4P, 1350 RPM	4P, 1350 RPM	4P, 1350 RPM	4P, 1350 RPM	4P, 1350 RPM
	Normal out		W	40W	40W	40W	40W	40W
	Coil resistance(Ambient temp.20˚C)		Ω	MAIN : 137Ω	MAIN : 137Ω	MAIN : 137Ω	MAIN : 137Ω	MAIN : 137Ω
				SUB : 132Ω	SUB : 132Ω	SUB : 132Ω	SUB : 132Ω	SUB : 132Ω
	Safety devices	Type		17AM034A5	17AM034A5	17AM034A5	17AM034A5	17AM034A5
		Operating temp.	Open ˚C	135 ± 5°C	135 ± 5°C	135 ± 5°C	135 ± 5°C	135 ± 5°C
	Run capacitor		µF x VAC	2µF X 450VAC	2µF X 450VAC	2µF X 450VAC	2µF X 450VAC	2.0µF X 450VAC
S-Motor	Type							
	Model			MSFCC20A03	MSFCC20A03	MSFCC20A03	MSFCC20A03	MSFCC20A03
	Rating			DC 12V	DC 12V	DC 12V	DC 12V	DC 12V
	Coil resistance (Ambient temp. 25˚C)		Ω	530Ω	530Ω	530Ω	530Ω	530Ω
Heat Exch.	Coil			AL-FIN/Copper tube	AL-FIN/Copper tube	AL-FIN/Copper tube	AL-FIN/Copper tube	AL-FIN/Copper tube
	Rows x Steps			2 x 15	2 x 15	2 x 15	2 x 15	2 x 15
	Fin pitch		mm	1.2	1.2	1.5	1.5	1.5
	Face area		m^2	0.315	0.315	0.315	0.315	0.315

■ Outdoor unit

Model				UQT24A1RE/UQT24A2RE/SH24TA1X	UQT24A1RB/UQT24A2RB	UQT18A1RE/UQT18A2RE/SH18TA1X	UQT18A1RB/UQT18A2RB	UQ18A1RE/UQ18A2RE/SH18ZA1X
Compressor	Type			Reciprocating	Reciprocating	Reciprocating	Reciprocating	Rotary
	Compressor model			AWG5532EXC	AWG5528EXN	AWG5524EXC	AWG5520EXN	48B180JV1EH
	Normal output		W	2660	2830	2030	2070	1885
	Comperssor oil kind			WITCO LP200 OR EQUIVALENT	WITCO LP200 OR EQUIVALENT	WITCO LP200 OR EQUIVALENT	WITCO LP200 OR EQUIVALENT	SUNSO-4GSD-T
	Comperssor oil		cc	INITIAL : 1125 REFILL : 1066	INITIAL : 1125 REFILL : 1066	INITIAL : 1125 REFILL : 1066	INITIAL : 1125 REFILL : 1066	600
	Oil Specific gravity			0.92	0.92	0.92	0.92	0.92
	Coil resistance(Ambient temp.25˚C)		Ω	Start winding : 2.49	Start winding : 1.94	Common to main : 2.98	Common to main : 2.72	Common to main : 1.84
				Run winding : 0.81	Run winding : 0.88	Common to sub: 1.42	Common to sub : 1.32	Common to sub : -
	Safety devices	Type		15HM2415-148	15HM2415-148	15HM2416-148	15HM2311-148	MRA12016-12007
		Overloal relay		Internal Line Break	Internal Line Break	Internal Line Break	Internal Line Break	External Line Break
		Operating temp.	Open ˚C	120	120	120	120	165°C
			Close ˚C	69	69	69	69	74°C
		Operating amp(Ambient temp.)		73.0 AT 2-10 SECOND	73.0 AT 2-10 SECOND	73.0 AT 2-10 SECOND	73.0 AT 2-10 SECOND	120°C : 10.7A 130°C : 9.4A
	Run capacitor		µF x VAC	45MF X 370VAC	35MF X 370VAC	35MF X 370VAC	25MF X 370VAC	40µF x 450VAC
Fan & Fan	Type			Propeller	Propeller	Propeller	Propeller	Propeller
	Dia. and length		mm	ø460	ø460	ø405	ø405	ø405
	Fan motor model			OSME-906SRC	OSM-906SRC	ASS030AVEB	ASS030ZTEC	ASS030AVEB
	Pols, rpm(at240V)			6P, 850/400 RPM	6P, 850/400 RPM	4P, 950/500 RPM	4P, 950/500 RPM	4P, 950/500 RPM
	Normal output		W	70W	70W	35W	35W	35W
	Coil resistance(Ambient temp.20˚C)		Ω	MAIN : 55Ω	MAIN : 55Ω	MAIN : 180Ω	MAIN : 160Ω	MAIN : 180Ω
				SUB : 60Ω	SUB : 65Ω	SUB : 200Ω	SUB : 170Ω	SUB : 200Ω
	Safety devices	Type		17AM037A5	17AM037A5	17AM034A5	17AM034A5	17AM037A5
		Operating temp.	Open ˚C	150±5°C	150±5°C	135±5°C	135±5°C	135±5°C
			Close ˚C					
	Run capacitor		µF x VAC	4µF x 450VAC	4µF x 450VAC	2.5µF x 450VAC	2.5µF x 450VAC	2.5µF x 450VAC
Heat Exch.	Coil			AL-FIN / Copper tube	AL-FIN / Copper tube	AL-FIN / Copper tube	AL-FIN / Copper tube	AL-FIN / Copper tube
	Rows x Steps			2 x 24	2 x 24	2 x 24	2 x 24	2 x 24
	Fin pitch		mm	1.7	1.7	1.7	1.7	1.7
	Face area		m^2	0.5376	0.5376	0.504	0.504	0.504

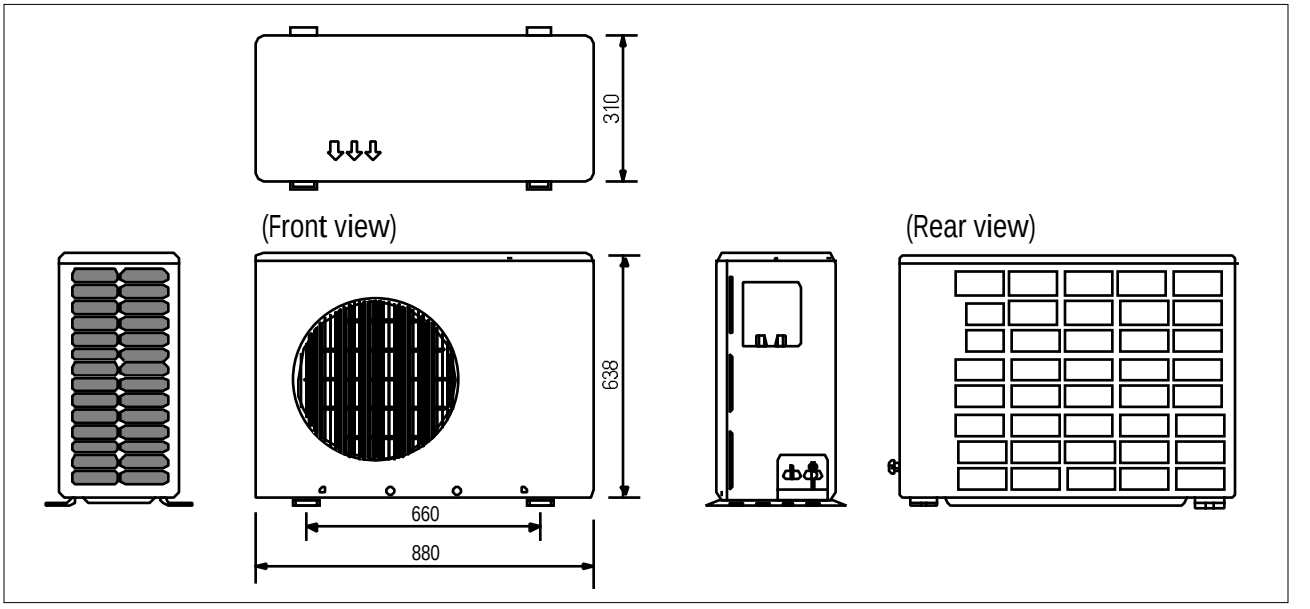
2-3 Dimensions

2-3-1 Indoor Unit

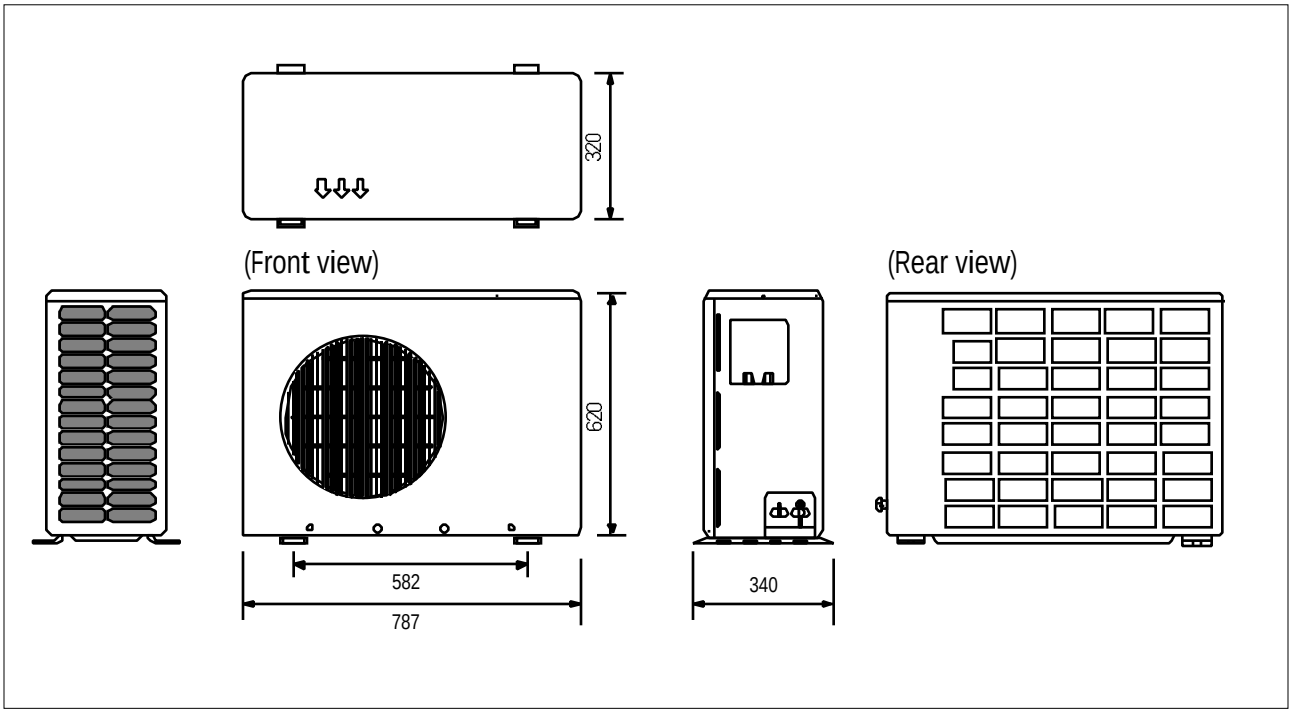


2-3-2 Outdoor Unit

2-3-2(a) 24K BTU

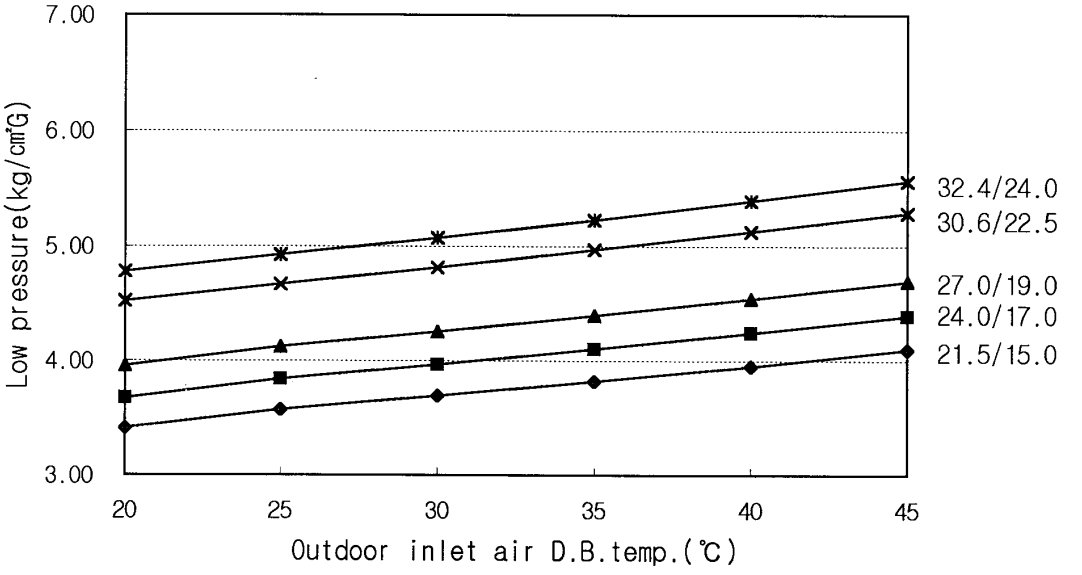


2-3-3(b) 18K BTU

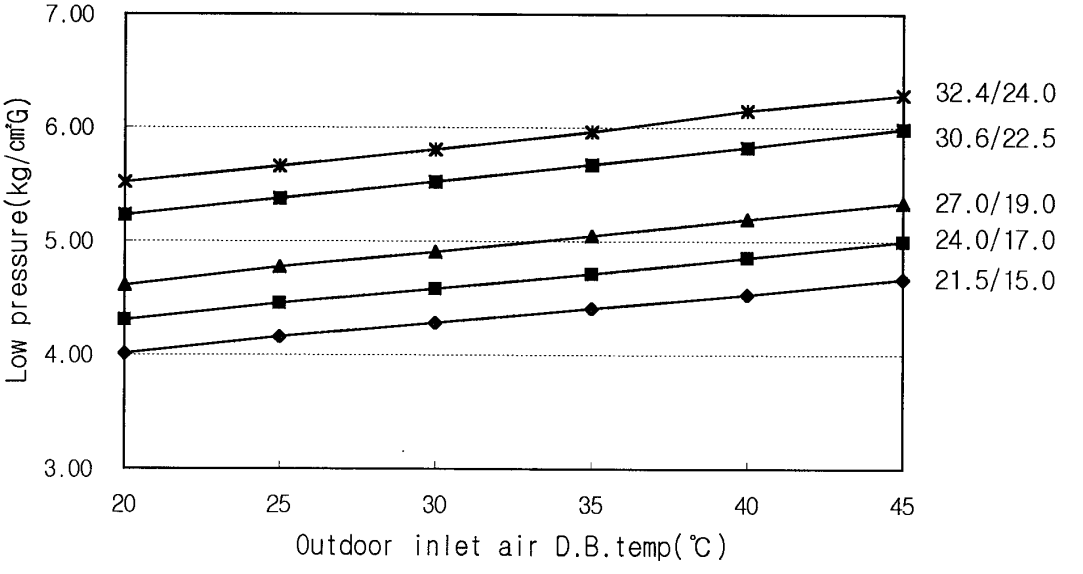


2-4 Pressure Graph

■ 24K BTU



■ 18K BTU



MEMO

3. Operating Instructions and Installation

3-1 Operating Instructions

3-1-1 Name & Function of Key in remote controller

NO	NAMED OF KEY	FUNCTION OF KEY
1		Power On/Off button to start and stop airconditioner or timer set up
2	(UP)	Temp. up button. To increase the temperatute by the pressing the temperature button
	(DOWN)	Temp. down button. To decrease the temperature by the pressing the temperature button
3		Each time you press this button Mode is changed in the following order : Auto Mode : Fan Only : Cool Mode : Heat Mode : Dry Mode
4		Press until the appearance. the air condition cools or heats the room as quickly as possible. after 30minutes, the air, the airconditioner is reset automatically to the previous mode
		Press until the appearance. the sleep timer can be used when you are cooling or heating your room to switch the air conditioner off automatically after a perriod of six hours.
5		Each time you press this button, FAN SPEED is changed in the following order.
6		Adjust air flow vertically.
7		The ON Timer enables you to **switch on** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cancel the On Time, press the (Set/Cancel) button.
8		The Off Timer enables you to **switch off** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To cancel the On Time, press the (Set/Cancel) button.
9		To select the 5 way function with the remote control, press the 5 way button one or more times until the desired mode is selected.. Each time you press the 5 way button Each 5 way indicator on the indoor unit comes on in or der.

3-1-1 Name & Function of Key in remote controller

1. AUTO MODE : In this mode, operation mode(COOL, HEAT) is selected automatically by the room temperature of initial operation.

Room Temp	Operation Type
Tr≥ 21°C+ΔT	Cool Operation (Set Temp:AUTO SETTING)
21°C +ΔT>Tr	Heat Operation (Set Temp : 22°C+ΔT)

   ΔT= -1°C, -2°C, 0°C+1°C+2°C
   ΔT is controlled by setting temperature up / down key of remote controller

2. COOL MODE : The unit operates according to the difference between the setting and room temperature. (18°C~30°C)

3. HEAT MODE : The unit operates according to the difference between the setting and room temperature.(16°C~30°C)
   *Prevention against cold wind : For about 3~5 minutes after initial operation, thermo control or “de-ice”, the indoor fan will either not operate or operate very slowly, then switch to the selected fan speed. This period is to allow the indoor unit's heat-exchanger to prewarm before emitting warm air.
   *High temperature release function : The outdoor unit for and compressor ON / OFF control for safety operation, when the over-heat is heat exchanger of indoor unit.
   *De-ice : Deicing operation is controlled by indoor unit's heat exchanger temperature and accumulating time of compressor's operation.
   De-ice end by sensing of the processing time by de-ice Condition.

4. DRY MODE : Has 3 states, each determined by room temperature.
   The unit operates in DRY mode.
   *Compressor ON / OFF Time is controlled compulsorily(can not set up the fan speed, always breeze).
   *Protective function : Low temperature release. (Prevention against freeze)

5. TURBO MODE : This mode is available in AUTO, COOL, HEAT, DRY, FAN MODE.
   When this button is pressed at first, the air conditioner is operated “powerful” state for 30 minutes regardless of the set temperature, room temperature.
   When this button is pressed again, or when the operating time is 30 minutes, turbo operation mode is canceled and returned to the previous mode.
   *But, if you press the TURBO button in DRY or FAN mode that is changed with AUTO mode automatically.

6. SLEEP MODE : Sleep mode is available only in COOL or HEAT mode.
   The operation will stop after 6 hours.
   *In COOL mode : The setting temperature is automatically raised by 1°C each 1hour When the temperature has been raised by total of 2°C, that temperature is maintained.
   *In HEAT mode : The setting temperature is automatically droped by 1°C each 1hour. When the temperature has been droped by total of 2°C, that temperature is maintained.

7. FAN SPEED : Manual (3 step), Auto (4 step)
   Fan speed automatically varies depending on both the difference between setting and the room temperature.

8. COMPULSORY OPERATION :
For operating the air conditioner without the remote controller.
*AUTO : The operating is the same function that AUTO MODE in the remote controller. And each time you press the button the 5WAY func-tion is changed as follow.
STD → NATURE → POWER → SAVING → SILENCE → POWER OFF
Each time you press This button, 5WAY function is changed in the following order
STD(standard) → NATURE → POWER(High-speed) → Saving(Power-Saving) → Quite
❊ STD(standard)( ) : General operation Mode
❊ NATURE( ) : The unit is operated according to health pattern control
❊ POWER( ) : The unit is operated in powerful state
❊ SAVING( ) : The unit is operated in power saving state
❊ SILENCE( ) : The unit is operated quitely
Each mode has Auto, Cool and SLEEP operation designed in advarce.

9. SWING : BLADE-H is rotated vertically by the stepping motor.
*Memory louver : When ON/OFF button is pressed at stop state, the BLADE-H returns to its original location which is operating state before stop
*Swing Set : Press the button under the remote control is displayed on LCD the and the blades move up and down. If the one more time press the button, blatles location is stop.

10. 24-Hour ON/OFF Real Setting Timer. : The air conditioner is turned ON at a specified time using
OFF TIMER : The air Conditioner is turned OFF at a specified time using
*ON TIMER : Only timer LED lights on.
*OFF TIMER : Both timer and operation LED lights on.

11. SELF Diagnosis

Check Point	LED DISPLAY					
	TIMER	STD	NATURE	POWER	SAVING	SILENCE
Indoor unit room temperture sensor error(open or short)	■	○	○	○	○	○
Indoor unit heat exchanger tempertute sensor error(open or short)	■	■	○	○	○	○
Indoor fan mal function	○	○	■	○	○	○
EEPROM error	■	■	■	○	○	○
Option error(option wasn't set up or option data error)	■	■	■	■	■	■

■ : LED blinking ○ : LED off

12. BUZZER SOUND : Whenever the ON/OFF button is pressed or whenever change occurs to the condition which is set up or select, the compulsory operation mode, buzzer is sounded "beep"

3-2 Installation

3-2-1 Selecting Area for Installation

Select an area for installation that is suitable to the customer's needs.

3-2-1(a) Indoor Unit

1. Make sure that you install the indoor unit in an area providing good ventilation. It must not be blocked by an obstacle affecting the airflow near the air inlet and the air outlet.
2. Make sure that you install the indoor unit in an area allowing good air handling and endurance of vibration of the indoor unit.
3. Make sure that you install the indoor unit in an area where there is no source of heat or vapor nearby.
4. Make sure that you install the indoor unit in an area from which hot or cool air is spread evenly in a room.
5. Make sure that you install the indoor unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (at least 1 meter).
6. Make sure that you install the indoor unit in an area which provides easy pipe connection with the outdoor unit, and easy drainage for condensed water.
7. Make sure that you install the indoor unit in an area which is large enough to accomodate the measurements shown in figure on the next page.

3-2-1(b) Outdoor Unit

1. Make sure that you install the outdoor unit in area not exposed to the rain or direct sun light.
   (Install a separate sunblind if exposed to direct sun light.)
2. Make sure that you install the outdoor unit in area allowing good air moment, not amplifying noise or vibration, especially to avoid disturbing neighbours.
   (Fix the unit firmly if it is mounted in a high place.)
3. Make sure that you install the outdoor unit in area providing good ventilation and which is not dusty. It must not be blocked by any obstacle affecting the airflow near the air inlet and the air outlet.
4. Make sure that you install the outdoor unit in area free from animals or plants.
5. Make sure that you install the outdoor unit in area not blocking the traffic.
6. Make sure that you install the outdoor unit in area easy to drain condensed water from the indoor unit.
7. Make sure that you install the outdoor unit in area which provides easy connection within the maximum allowable length of a coolant pipe(18**XX**: 15meters, 24**XX**: 20meters).

   Note
   1. Add (18XX:30g, 24XX:40g) of refrigerant (R-22) for every 1 meter if the pipe length exceeds the standard pipe length of 5 meters.
   2. Maintain a height between the indoor and outdoor units of less than 8 meters.
8. Make sure that you install the outdoor unit in an area which is large enough to accommodate the measurements shown in figure on the next page.

3-2-1(c) Remote Control Unit

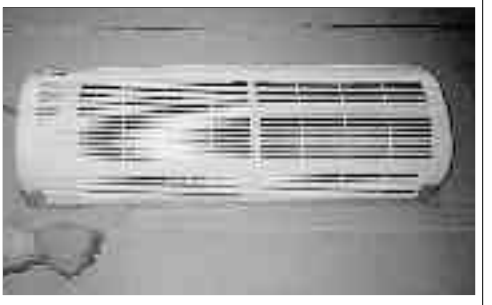
1. Make sure that you install the remote control unit in an area free from obstacles such as curtains etc, which may block signals from the remote control unit.
2. Make sure that you install the remote control unit in an area not exposed to direct sunlight, and where there is no source of heat.
3. Make sure that you install the remote control unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (at least 1 meter).

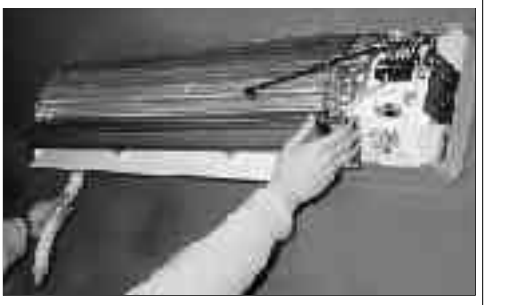
Caution :
It is harmful to the air conditioner if it is used in the following environments: greasy areas (including areas near machines), salty areas such as coast areas, areas where sulfuric gas is present such as hot spring areas. Contact your dealer for advice.

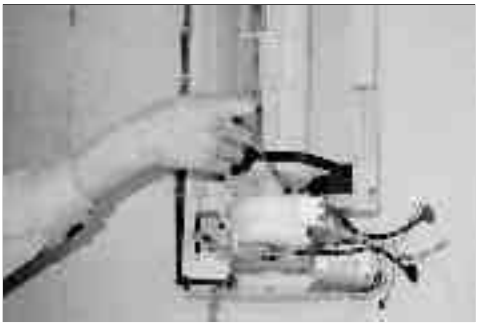
4. Disassembly and Reassembly

Stop operation of the air conditioner and remove the power cord before repairing the unit.

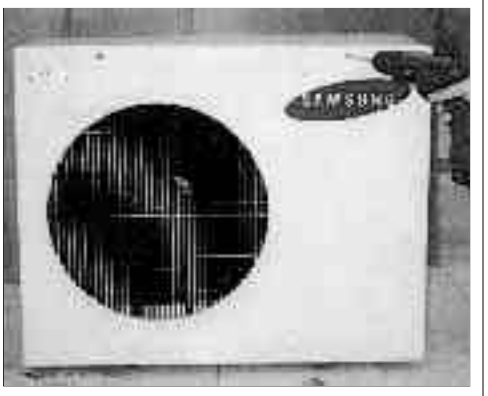
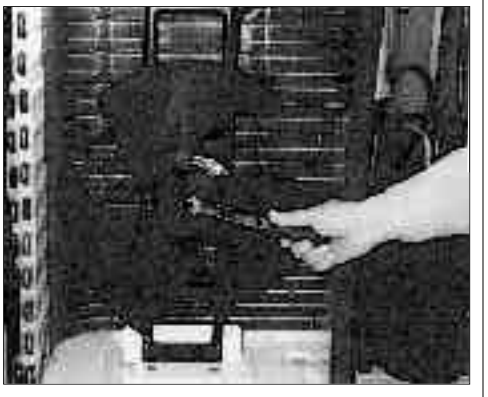
4-1 Indoor Unit

No	Parts	Procedure	Remark
1	Front Grille	1) Stop the air conditioner operation and block the main power. 2) Seperate tape of front panel upper.	
		3) Contract the second finger to the left, and right handle and pull to open the inlet grille. 4) Take the left and right filter out. * Take the Deadorizing and Electrostatic filter out. (Optional) 5) Loosen one of the right fixing screw and seperate the terminal cover. 6) Loosen three fixing screws of front grille.	
		7) Pull the upper left, right and Center of discharge softly for the outside cover to be pulled out.	
		8) Pull softly the lower part of discharge and push it up. **Caution;** Assemble the front panel and fix the hooks of left, right and Center	

No	Parts	Procedure	Remark
2	Ass'y Tray Drain.	1) Do "1", above. Separate the drain hose from the extension drain hose. 2) Take the display PCB out. (Right of indoor unit) 3) Pull tray drain out from the back body.	 
3	Electrical Parts (Main PCB)	1) Do "1", "2", above 2) Take all the connector of PCB upper side out. (Inclusion Earth Wire) 3) Separate the outdoor unit connection wire from the terminal block. 4) If pulling the Main PCB up. it will be taken out.	
4	Heat Exchanger	1) Do "1" and "2", "3", above 2) Loosen two fixing earth screws of right side. 3) Separate the connection pipe. 4) Separate the bush body at the upper side and holder at the rearside. 5) Loosen the two fixing screws of left side. 6) Lifting the heat exchanger up a little to push the up side for separation from the indoor unit.	

No	Parts	Procedure	Remark
5	Fan Motor and Cross Fan	1) Do “1” “2” ”3” “4”, above. 2) Loosen the fixing three screws and separate the motor holder. 3) Loosen the fixing screw of fan motor. (By use of M3 wrench) 4) Separate the fan motor from the fan. 5)Separate the fan from the left holder bearing.	

4-2 Outdoor Unit

No	Parts	Procedure	Remark
1	Cabinet	1) Turn off the unit and remove the power cable 2) Remove the top cover. 3) Remove the control box cover. 4) Unplug the ass'y cable. 5) Remove the cabi-side. 6) Remove the cabi-front. * When you assemble the parts, check if the each parts and electric connectors are fixed firmly.	
2	Fan Motor & Propeller Fan	1) Do Procedure 1 above. 2) Remove the nut flange. (Turn to the right to remove as it is a left turned screw) 3) Disassemble the propeller fan.	

5. Troubleshooting

5-1 Items to be checked first

1) The input voltage should be rating voltage ±10% range.
The airconditioner may not operate properly if the voltage is out of this range.

2) Is the link cable linking the indoor unit and the outdoor unit linked properly?
The indoor unit and the outdoor unit shall be linked by 6 cables.
Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
Otherwise the airconditioner may not operate properly.

3) When a problem occurs due to the contents illustrated in the table below it is a symptom not related to the malfunction of the airconditioner.

NO	Operation of air conditioner	Explanation
1	The STD operation indication LED blinks when a power plug of the indoor unit is plugged in for the first time.	It indicates power is on. The LED stops blinking if the operation ON/OFF button on the remote control unit is pushed.
2	In a COOL operation mode, the compressor does not operate at a room temperature higher than the setting temperature that the IN DOOR FAN should operate. In a HEAT operation mode, the compressor does not operate at a room temperature lower than the setting temperature that indoor fan should operate.	In happens after a delay of 3 minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after a delay of 3 minutes, the indoor fan is adjusted automatically with reference to a temperature of the air blew
3	Fan speed setting is not allowed in AUTO or DRY mode.	The speed of the indoor fan is set to LL in DRY mode. Fan speed is 5 steps is selected automatically in AUTO mode.
4	Compressor stops operation intermittently in DRY mode.	Compressor operation is controlled automatically in DRY mode depending on the room temperature and humidity.
5	Compressor of the outdoor unit is operating although it is turned off in a HEAT mode.	When the unit is turned off while de-ice is activated, the compressor continues operation for up to 9 minutes (maximum) until the deice is completed.
6	Timer LED only of the indoor unit lights up and the air conditioner does not operate.	Timer is being activated and the unit is in ready mode. The unit operates normally if the timer operation is cancelled.
7	The compressor and indoor fan stop intermittently in HEAT mode.	The compressor and indoor fan stop intermittently if room temperature exceeds a setting temperature in order to protect the compressor from overheated air in a HEAT mode.
8	Indoor fan and outdoor fan stop operation intermittently in a HEAT mode.	The compressor operates in a reverse cycle to remove exterior ice in a HEAT mode, and indoor fan and outdoor fan do not operate intermittently for within 20% of the total heater operation
9	The compressor stops intermittently in a COOL mode or DRY mode, and fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air frozen depending on the inside/outside air temperature.

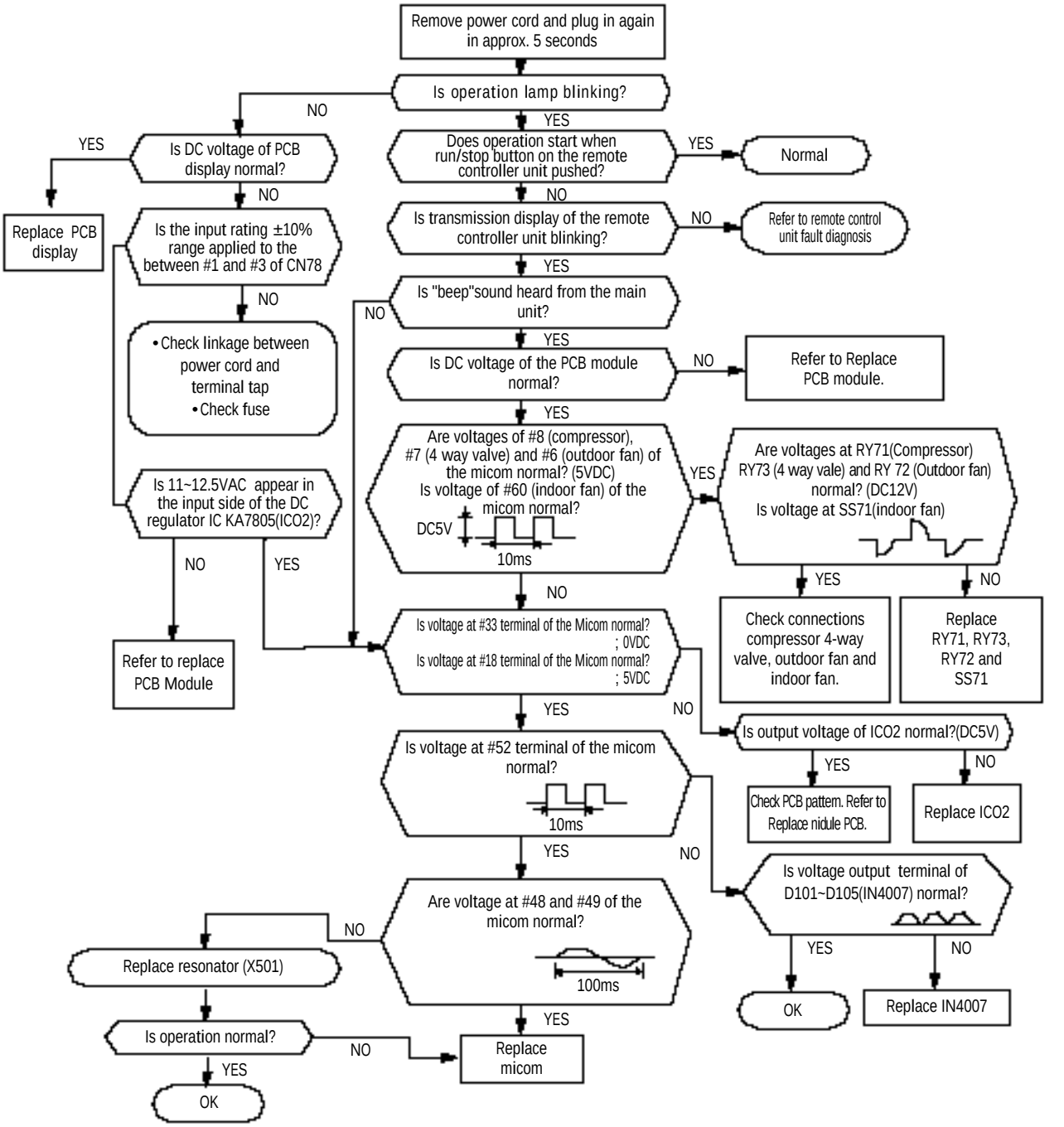
4) Indoor unit observes operation condition of the air conditioner, and displays self diagnosis details on the display panel.

NO	Display	Self Diagnosis
1	STD LED blinking (1Hz)	Restore from power failure (input initial power)
2	TIMER LED blinking (1Hz)	Indoor unit Room sensor Error (open or short)
3	STD and TIMER LED blinking (1Hz)	Indoor unit heat exchanger temperature sensor Error (open or short)
4	BIO LED blinking (1Hz)	Indoor fan malfunctioning (for spead is Below 450rpm)
5	STD, BIO and TIMER LED blinking(IUZ)	EEPROM Error
6	AII LED blinking (1Hz)	Oprion Enor (Option wasn't setup or option dala error)

5-2 Fault Diagnosis by Symptom

5-2-1 No Power (completely dead)-Initial diagnosis

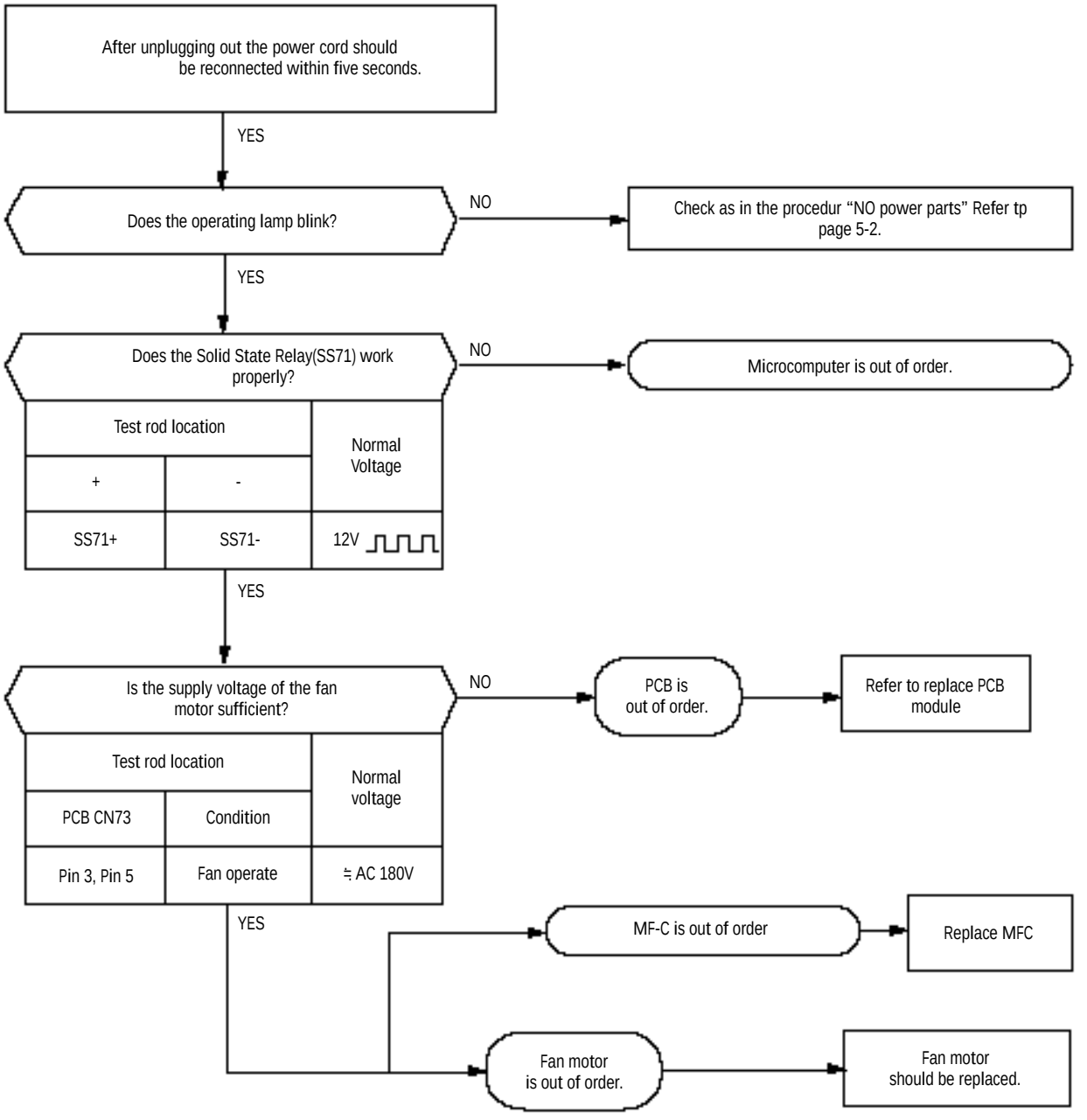
1) Checklist :
   (1) Is input voltage normal? (the rating voltage ±10% range)
   (2) Is AC power linked correctly?
   (3) Are connections between primary side, secondary side of the power transformer and PCB good.
   (4) Is input voltage of DC regulator IC KA7805 (IC02) normal? (11VDC-12.5VDC)
   (5) Is input voltage of DC regulator IC KA7805 (IC02) normal? (4.5VDC-5.5VDC)


Remove power cord and plug in again in approx. 5 seconds
Is operation lamp blinking?
NO
YES
Is DC voltage of PCB display normal?
YES
Replace PCB display
NO
Is the input rating ±10% range applied to the between #1 and #3 of CN78
NO
• Check linkage between power cord and terminal tap
• Check fuse
Is 11~12.5VAC appear in the input side of the DC regulator IC KA7805(ICO2)?
NO
YES
Refer to replace PCB Module
Does operation start when run/stop button on the remote controller unit pushed?
YES
Normal
NO
Is transmission display of the remote controller unit blinking?
NO
Refer to remote control unit fault diagnosis
YES
Is "beep"sound heard from the main unit?
NO
YES
Is DC voltage of the PCB module normal?
NO
Refer to Replace PCB module.
YES
Are voltages of #8 (compressor), #7 (4 way valve) and #6 (outdoor fan) of the micom normal? (5VDC)
Is voltage of #60 (indoor fan) of the micom normal?
DC5V
10ms
YES
Are voltages at RY71(Compressor) RY73 (4 way vale) and RY 72 (Outdoor fan) normal? (DC12V)
Is voltage at SS71(indoor fan)
YES
NO
Check connections compressor 4-way valve, outdoor fan and indoor fan.
Replace RY71, RY73, RY72 and SS71
NO
Is voltage at #33 terminal of the Micom normal? ; 0VDC
Is voltage at #18 terminal of the Micom normal? ; 5VDC
YES
NO
Is output voltage of ICO2 normal?(DC5V)
YES
NO
Check PCB pattern. Refer to Replace nidule PCB.
Replace ICO2
Is voltage at #52 terminal of the micom normal?
10ms
YES
NO
Is voltage output terminal of D101~D105(IN4007) normal?
YES
NO
OK
Replace IN4007
Are voltage at #48 and #49 of the micom normal?
100ms
NO
Replace resonator (X501)
YES
Is operation normal?
NO
YES
OK
Replace micom

5-2-2 When the Indoor Unit Fan Does Not Operate. (Initial Diagnosis)

1) Checklist :
   (1) Is the indoor unit fan motor properly connected with the connector (CN73)?
   (2) Is the AC voltage correct?
   (3) Is HALL IC in indoor fan motor properly connected with the connector (CN43)?
   (4) Is the running capacitor properly connected with the solder part of the PCB?

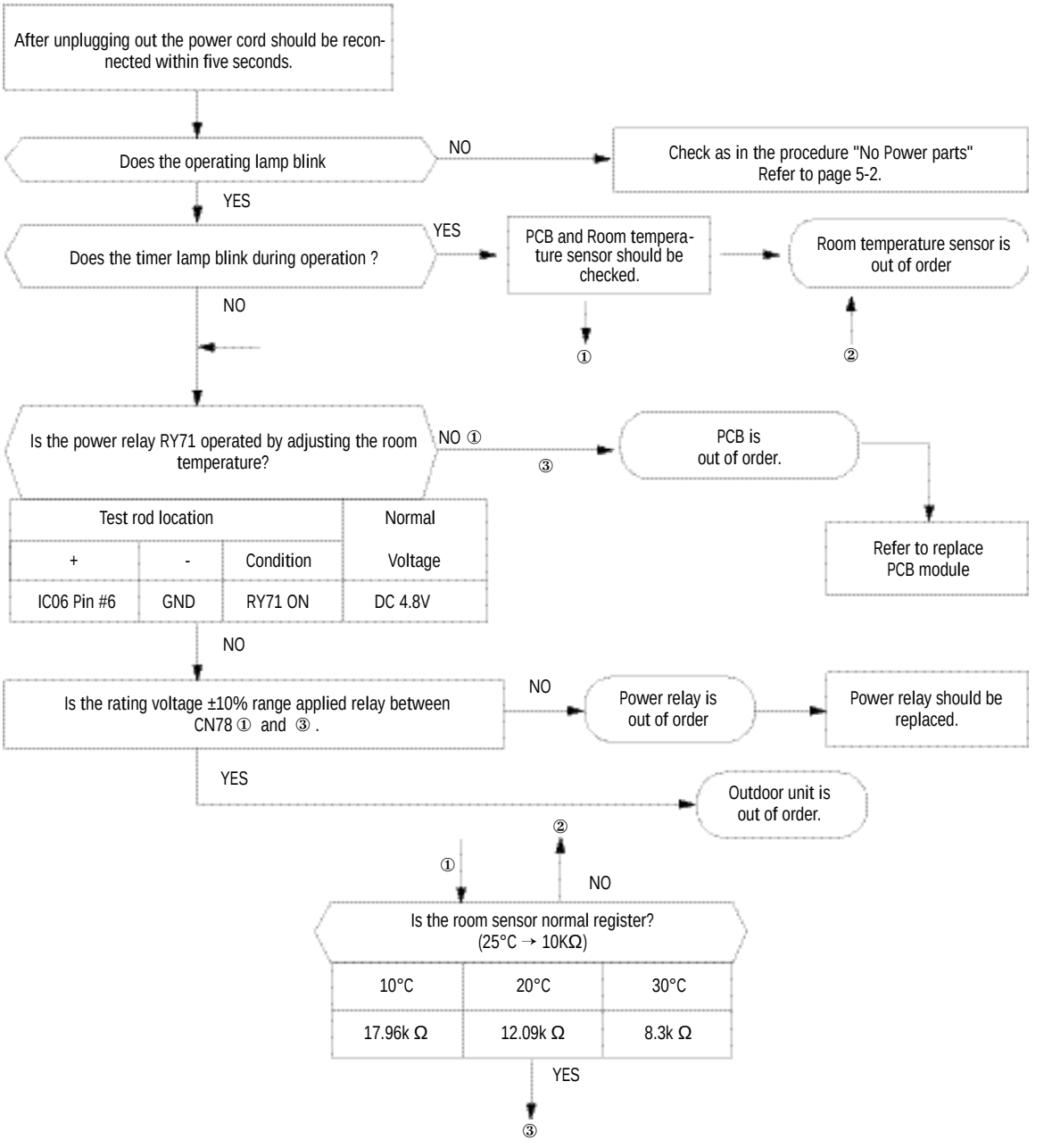
2) Troubleshooting procedure



5-2-3 When the Outdoor Unit Does Not Operate. (Initial Diagnosis)

1) Checklist :
   (1) Is input voltage normal? (the rating voltage ±10% range)
   (2) Is the set temperature of the remote control higher than room temperature in COOL mode?
   (3) Is the set temperature of the remote control lower than room temperature in HEAT mode?
   (4) Is the POWER IN connector (CN78) linked correctly?
   (5) Is the outdoor unit properly connected with the TERMINAL BLOCK connector(7P)?

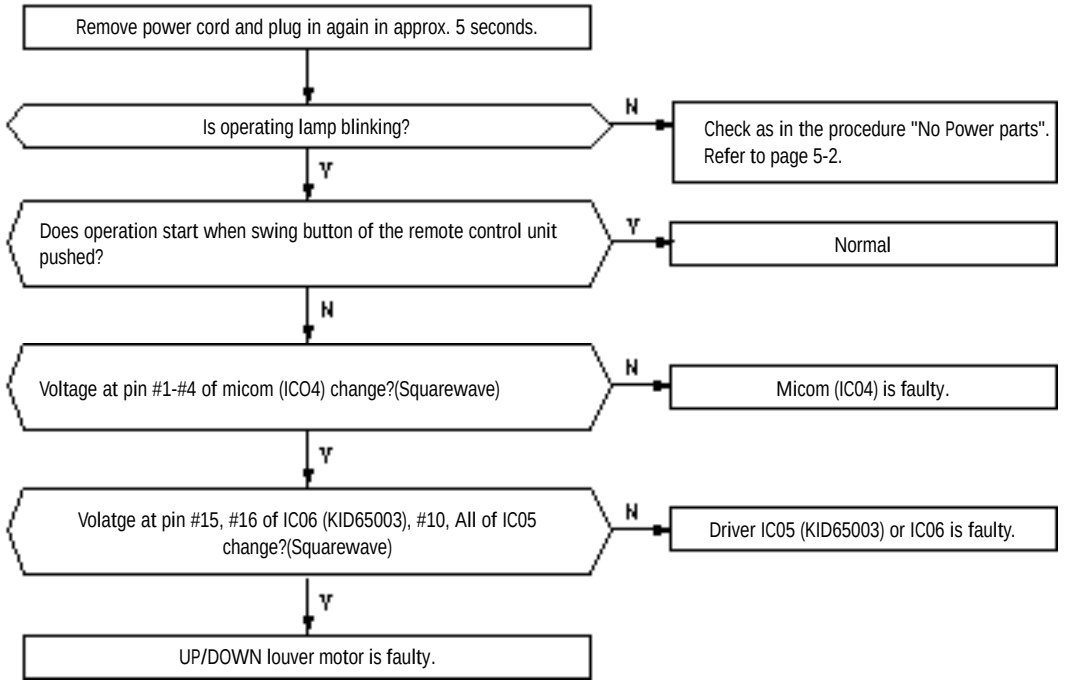
2) Troubleshooting procedure



5-2-4 When the UP/DOWN Louver Moter Does Not Operate. (Initial Diagnosis)

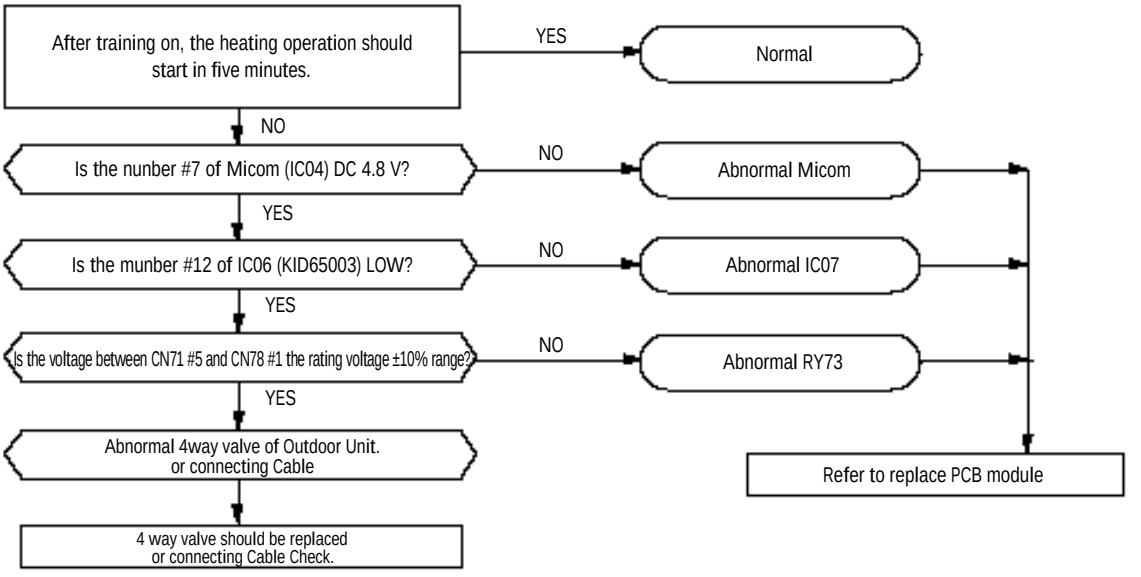
1) Checklist :
   (1) Is input voltage normal? (the rating voltage ±10% range)
   (2) Is the UP / DOWN louver motor properly connected with the connector (CN61)?

2) Troubleshooting procedure


Remove power cord and plug in again in approx. 5 seconds.
Is operating lamp blinking?
N
Check as in the procedure "No Power parts". Refer to page 5-2.
Y
Does operation start when swing button of the remote control unit pushed?
Y
Normal
N
Voltage at pin #1-#4 of micom (ICO4) change?(Squarewave)
N
Micom (IC04) is faulty.
Y
Volatge at pin #15, #16 of IC06 (KID65003), #10, All of IC05 change?(Squarewave)
N
Driver IC05 (KID65003) or IC06 is faulty.
Y
UP/DOWN louver motor is faulty.

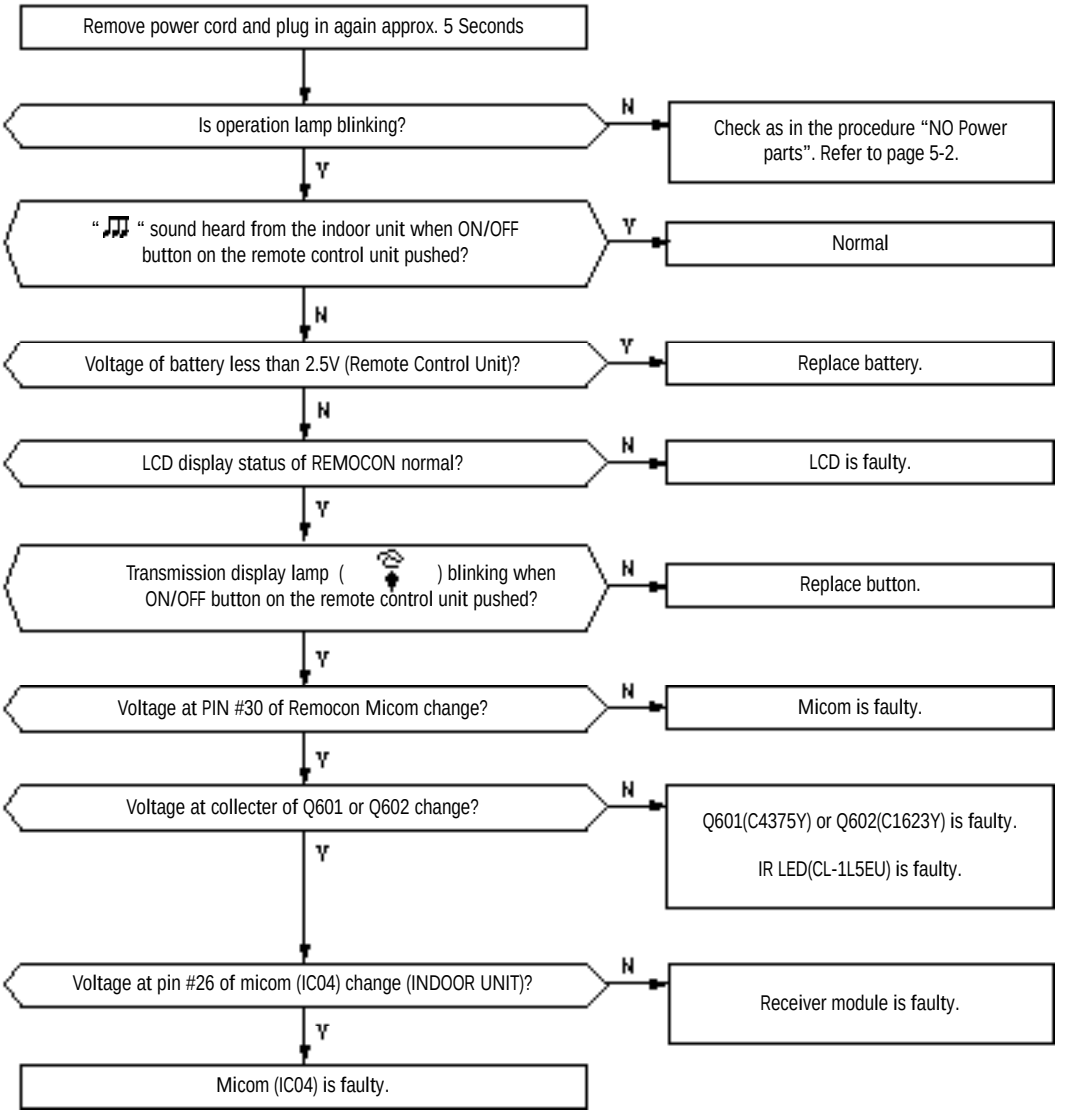
5-2-5 In the Heat mode, When there is no warm air current. Check this first;

(1) Is the set temperature of Remote Control lower than room temperature in Heat mode?
(2) Is the Indoor PCB properly connected with the CN71 and CN78 connector?


After training on, the heating operation should start in five minutes.
YES
Normal
NO
Is the nunber #7 of Micom (IC04) DC 4.8 V?
NO
Abnormal Micom
YES
Is the munber #12 of IC06 (KID65003) LOW?
NO
Abnormal IC07
YES
Is the voltage between CN71 #5 and CN78 #1 the rating voltage ±10% range?
NO
Abnormal RY73
YES
Abnormal 4way valve of Outdoor Unit. or connecting Cable
4 way valve should be replaced or connecting Cable Check.
Refer to replace PCB module

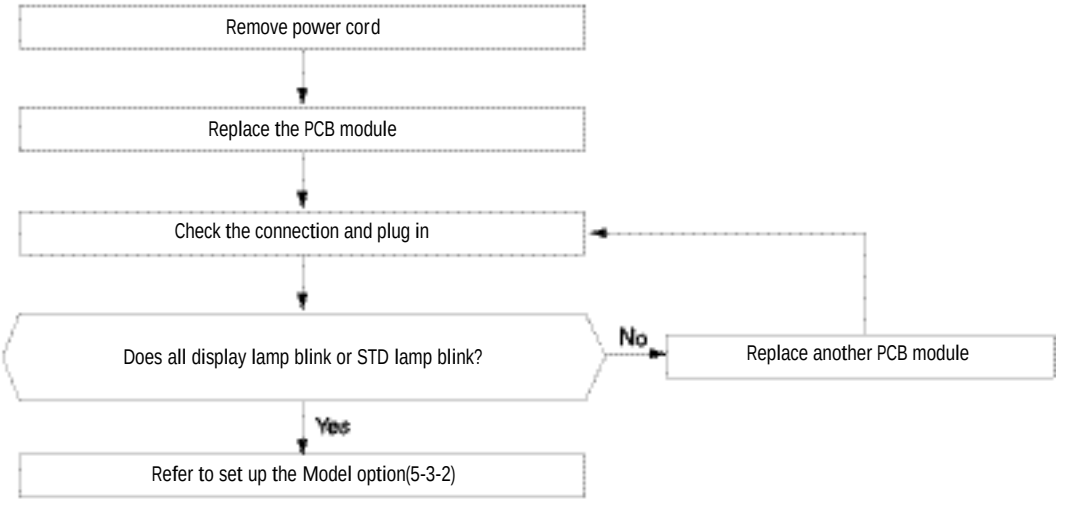
5-2-6 If Operation By Remote Control Unit Is Impossible. (Initial Diagnosis)

1) Troubleshooting procedure


Remove power cord and plug in again approx. 5 Seconds
Is operation lamp blinking?
N
Check as in the procedure "NO Power parts". Refer to page 5-2.
Y
" " sound heard from the indoor unit when ON/OFF button on the remote control unit pushed?
Y
Normal
N
Voltage of battery less than 2.5V (Remote Control Unit)?
Y
Replace battery.
N
LCD display status of REMOCON normal?
N
LCD is faulty.
Y
Transmission display lamp ( ) blinking when ON/OFF button on the remote control unit pushed?
N
Replace button.
Y
Voltage at PIN #30 of Remocon Micom change?
N
Micom is faulty.
Y
Voltage at collecter of Q601 or Q602 change?
N
Q601(C4375Y) or Q602(C1623Y) is faulty.
IR LED(CL-1L5EU) is faulty.
Y
Voltage at pin #26 of micom (IC04) change (INDOOR UNIT)?
N
Receiver module is faulty.
Y
Micom (IC04) is faulty.

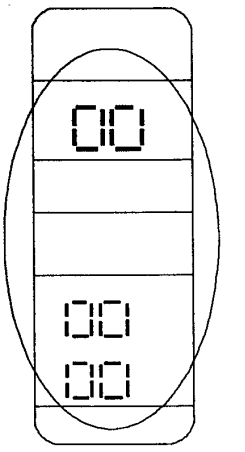
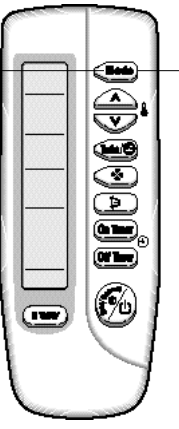
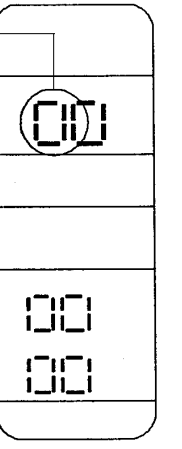
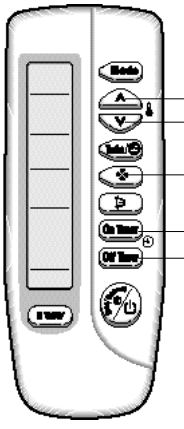
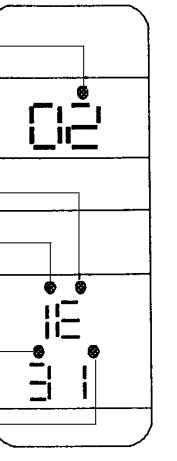
5-3 Replace PCB module

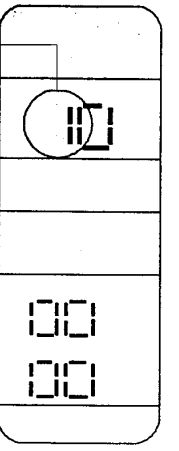
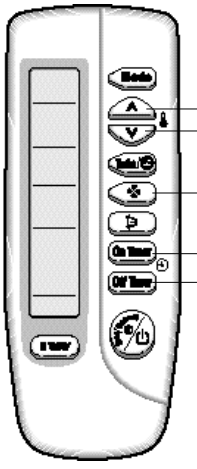
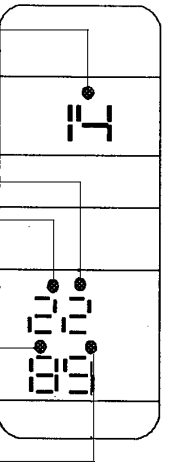
5-3-1 Replace PCB module


Remove power cord
Replace the PCB module
Check the connection and plug in
Does all display lamp blink or STD lamp blink?
No
Replace another PCB module
Yes
Refer to set up the Model option(5-3-2)

5-3-2 Set up the Model option

If you make the replacement of the ASS'Y CONTROL-IN or MAIN PCB ,
Be sure to be set up the model option as follow the steps

Remote controller operation method as per the step	Applicable key	Display status
1st step Method) ① Remove the battery of remote controller ② Press the temperature raise/down key simultaneously ③ Insert the battery again (Result) If the screen of remocn displays as shown in the right, go to the second step		
2nd step Method) If the first digit of LCD is 0 on the remocon screen, go to the 3rd step. ❊ If it is 1, press the mode key once to change to 0 and go to the 3rd step.		
3rd step Method) Press the marked key to input the option number. example) 021E31 Result) Go to 4th step if it displays as shown in the right (The number increases from 1~9, and A, b, C, d, E, F whenever pressing the key.)		

Remote controller operation method as per the step	Applicable key	Display status
4th step Method) After completion of 3rd step, and if the MODE KEY is pressed once, 1. 1~3 steps are saved internally 2. If the first number at the time is “1”, it is correct and go to 5th step ❊ If pressing mode key and the first digit becomes 0, the screen of 1~3 steps can be seen.		
5th step Method) Pressing the marked key to input the option number. example) 142285 Result) If it displays as shown in the right go to the 6th step		
6th step Method) When pressing the operation ON/OFF key with the direction of remote controller for set, the sound “Ding” or “Diriring” is heard and then the input of option is completed. ❊ Refer to the right side if the error appears.	ERROR MODE 1. When the lamp(STANDARD( ), NATURE( ), TIMER( ) is flickering → failuse of option input After removing the set power cord and insert it again, pressing the operation on/off key to retry and if the condition is same, EPROM is deffective or misinsertted. So replace the PCB.	2. When all lamps ( ) are flickering with the sound of “Diriring” → The current option input is different from that of already input one: Check the option number correctly and if it is correct, press the key once more to input the option. (check correctly) → If the option is not input at the time and the all lamps are continuously flickering ; since it is the case that the option number is out of the input range, check the option number again and do again the steps from 1 - 6steps

■ OPTION ITEMS

REMOCON / MODEL	SEG1	SEG2	SEG3	SEG4	SEG5	SEG6	SEG7	SEG8	SEG9	SEG10	SEG11	SEG12
AQT24A1(2)RE	0	9	4	6	1	7	1	A	0	2	3	F
SH24TA1	0	9	4	6	1	7	1	A	0	2	3	F
AQT24A2RE	0	8	4	6	1	7	1	A	0	2	3	F
AQT24A2RB	0	8	4	6	1	7	1	A	0	2	3	F
AST24A1RE	0	9	0	0	0	0	1	A	0	2	3	F
SC24TA1	0	9	0	0	0	0	1	A	0	2	3	F
AST24A2RE	0	8	0	0	0	0	1	A	0	2	3	F
AST24A2RB	0	8	0	0	0	0	1	A	0	2	3	F
AQT18A1RE	0	9	7	4	1	7	1	A	0	0	F	B
SH18TA1	0	9	7	4	1	7	1	A	0	0	F	B
AQT18A2RE	0	8	7	4	1	7	1	A	0	0	F	B
AQT18A2RB	0	8	7	4	1	7	1	A	0	0	F	B
AQ18A1RE	0	9	4	4	1	7	1	A	0	2	1	D
SH18ZA1	0	9	4	4	1	7	1	A	0	2	1	D
AQ18A2RE	0	8	4	4	1	7	1	A	0	2	1	D
AST18A1RE	0	9	0	0	0	0	1	A	0	0	F	B
SC18TA1	0	9	0	0	0	0	1	A	0	0	F	B
AST18A2RE	0	8	0	0	0	0	1	A	0	0	F	B
AST18A2RB	0	8	0	0	0	0	1	A	0	0	F	B
AS18A1RE	0	9	0	0	0	0	1	A	0	2	1	D
SC18ZA1	0	9	0	0	0	0	1	A	0	2	1	D
AS18A2RE	0	8	0	0	0	0	1	A	0	2	1	D

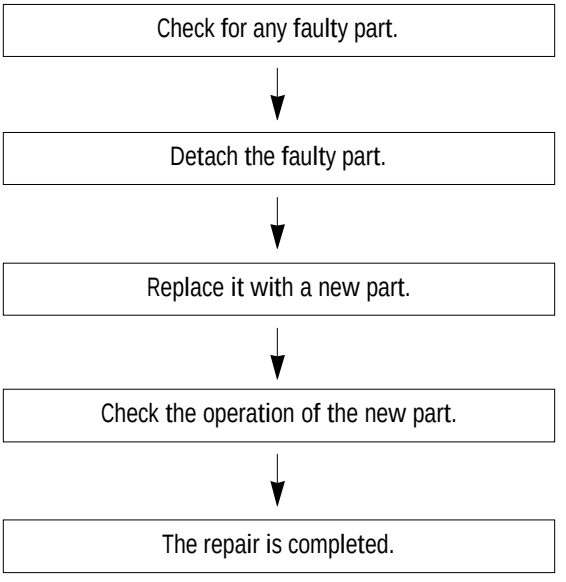
5-4 PCB Inspection

5-4-1 Cautions for Part Replacement

1. The human body carries much static electricity. Before touching a part for repair, replacement or the similar purpose, be sure to touch a grounded metallic portion by hand to let the static electricity go through the matallic portion to the earth. Especially when handling any micro computer or IC, carefully remove such static electricity before touching them.
2. When repairing any part on a work bench, be sure to place an insulative sheet on the bench and always keep the sheet surface neat without any metal fragments. If any such fragment touches a part, a secondary trouble will possibly be caused in the part.
3. Before replacing any parts, be sure to turn off the power supply. If such replacement is done with the power supply kept on, an electric shock, short circuit or destruction of a part may result.
4. During replacement or repair of a part, carefully handle it : The printed circuit board has fine lead wires (jumper wires) and glass-made parts (diode) on its substrate. So if a circuit board is roughly handled, such lead wires and parts will be easily broken or damaged by bending or shock.
5. When soldering the lead wires of any new part, be sure to polish them using an emery paper or the like before solding them. Since the lead wires of any new part are covered with an oxide film, solder cannot adhere to the lead wires if not polished.
6. When soldering any part, care should be exercised not to apply any high-wattage soldering iron to the part for a long time. Some parts are of so low a heat resistance that they may be broken or have the properties changed if a soldering iron is so applied (Otherwise, the pattern may possibly be separated and raised).
7. The heat of the soldering iron should be transfered to the entire object to be soldered. If the solder pieces are not well fused due to insufficient transfer of the heat from the soldering iron, no satisfactory electrical continuity can be assured even if the soldered objects appear well connected to each other.
8. The solder used should be limited to a minimum. If excessive solder is used, it will cause inter-pattern contact, which may cause malfunction of the circuit.

5-4-2 Procedure

The parts should be replaced in the following procedure.


Check for any faulty part.
Detach the faulty part.
Replace it with a new part.
Check the operation of the new part.
The repair is completed.

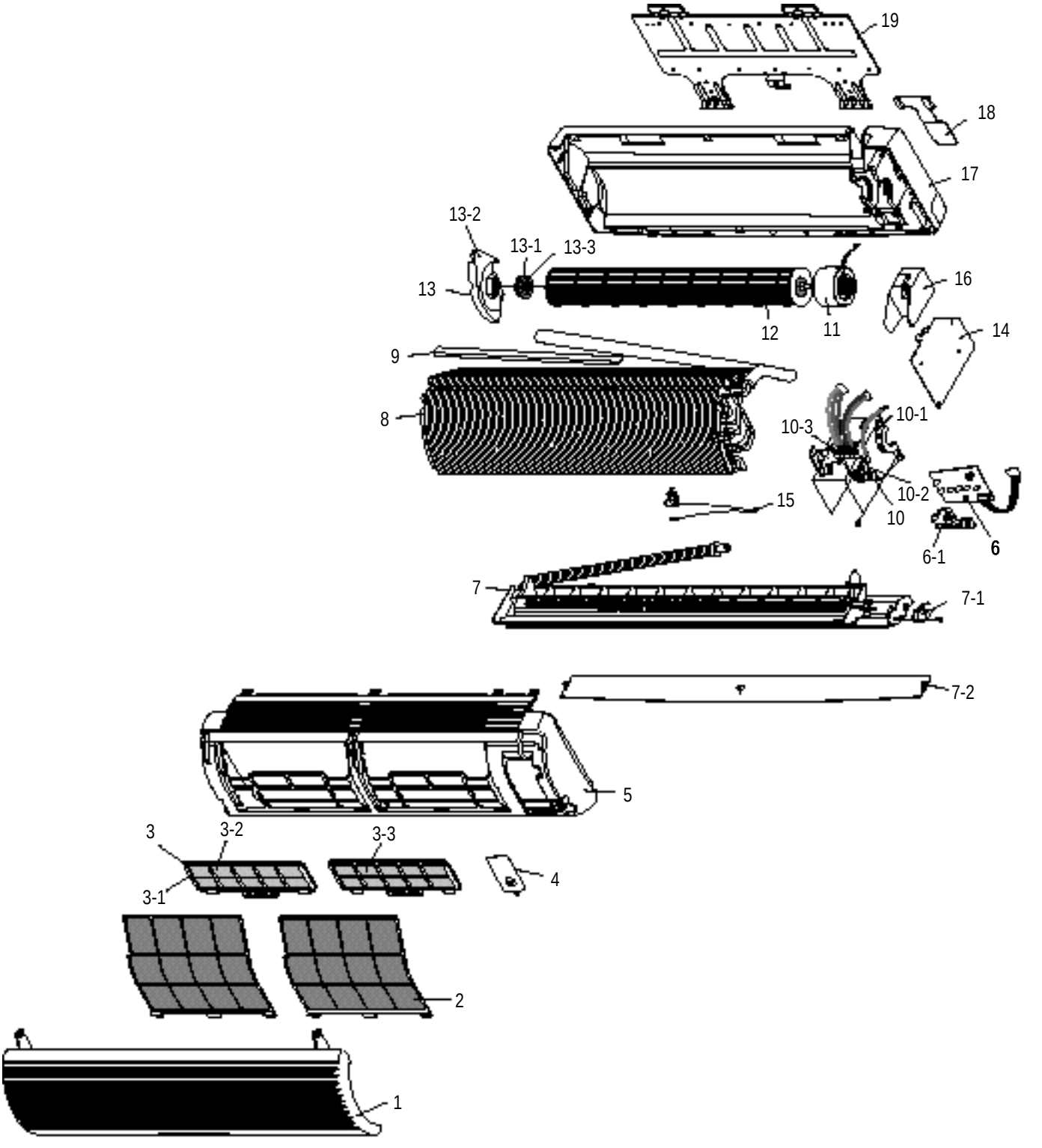
5-4-3 Detailed Procedure

No.	Malfunction	Checking point (symptoms)	Causes
1	Pull out the power plug from the AC terminal and confirm the fuse on the PCB assembly	1. Is the broken?	1. Voltage over 2. Indoor unit fan motor short-circuit.
2	Turn the power on. If lamp blinks trouble is not related to the items 1 through 4 on the right.	Voltage check	
		1. AC voltage at both end of transformer Primary? ; rating voltage ±10% range	1. Irregular power code or power fuse, or poor wiring.
			2. Transformer is faulty.
		3. DC voltage at OUT and GND of IC01 (KA7812)? ; 12VDC	3. Power circuit is faulty.
		4. DC voltage at OUT and GND of IC02? ; 5VDC	4. Power circuit is faulty.
		5. DC voltage at Q201 Base and GND change? ; squarewave	5. Q201 is faulty.
3	Set operating mode when RMC switch pushed. Except for [FAN]mode and [TIMER] mode.	Voltage check	
		1. Voltage of relay (RY71) coil Voltage at PIN#11, PIN#12, PIN#15 of IC07 ; 12VDC	1. Relay(RY 71) coil is open. IC07 is faulty.
		2. Voltage at CN78 #1 and CN78 #5 ; rating voltage ±10% range	2. Relay(RY 71) contactor is faulty.
4	Set operating mode when RMC switch pushed. 1. COOL mode 2. TURBO operating	1. Compressor does not operate.	1. PCB is faulty. 2. Connecting is faulty.
5	Set operating mode when RMC switch pushed. 1. HEAT mode 2. TURBO operating	1. Compressor does not operate	1. PCB is faulty. 2. Connecting is faulty.
6	Set operating mode when RMC switch pushed. 1. [FAN] mode 2. Fan speed [Hi] 3. Continuously operation	1. Voltage at ③⑤ both ends of CN73 : above 180V~	1. Indoor unit fan motor is faulty.
		2. Indoor unit fan motor does not operate.	2. Poor connection of indoor fan motor and connector of RPM sensing (CN43)

MEMO

6. Exploded Views and Parts List

6-1 Indoor Unit

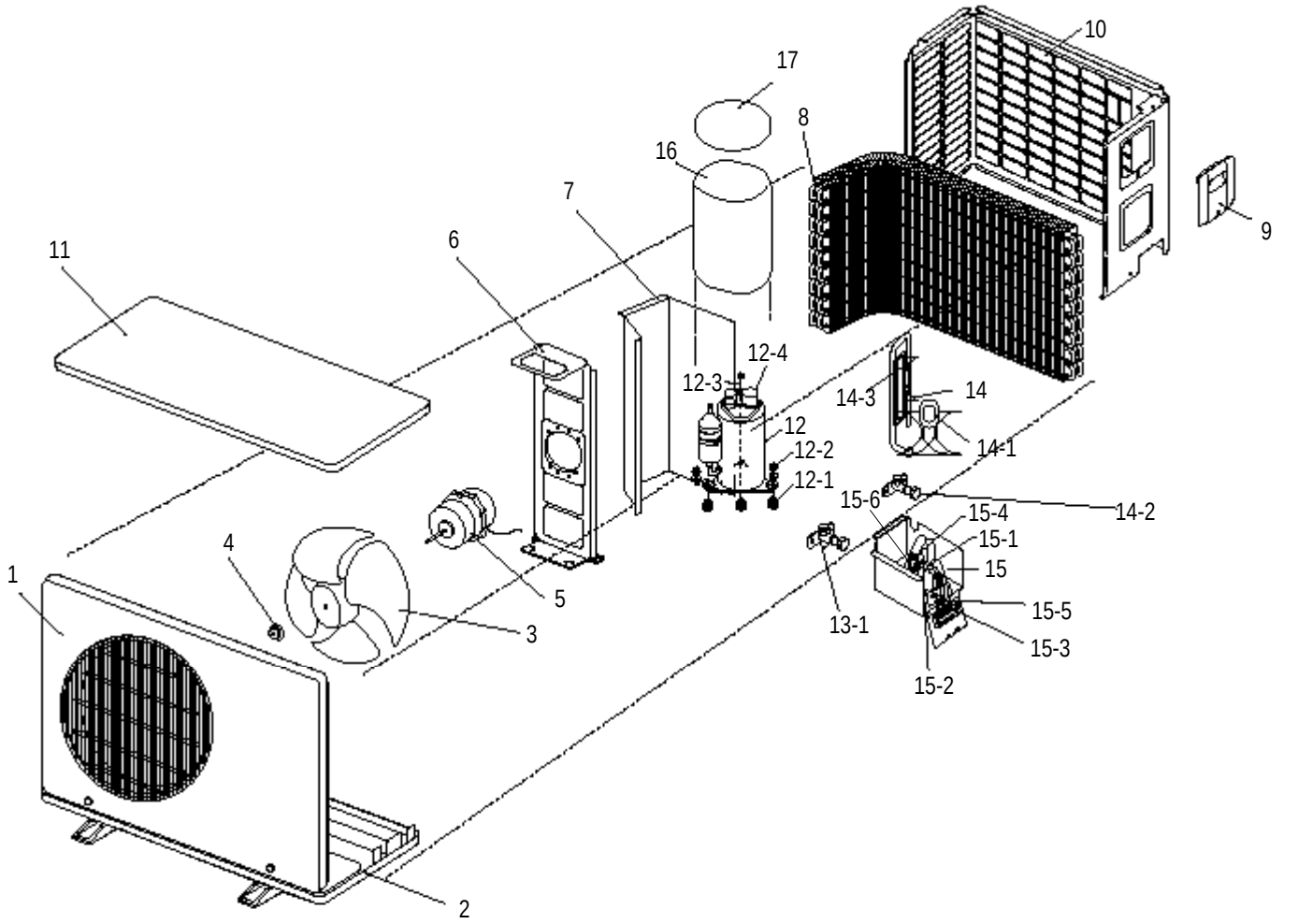


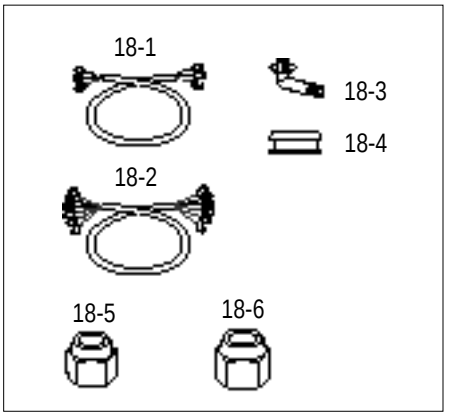
■ Parts List

No.	CODE NO	Description	Specification	Q'TY				
				AQT24A1(2)RE SH24TA1	AQT24A1(2)RB	AQT18A1RE AQT18A2RE SH18TA1	AQT18A1RB AQT18A2RB	AQ18A1RE AQ18A2RE SH18ZA1
1	DB64-00127A	GRILLE AIR INLET	HIPS	1	1	1	1	1
2	DB63-30150C	GUARD AIR FILTER	PP	2	2	2	2	2
3	DB74-10101C	CLEANER FILTER ASS'Y	ASS'Y	1	1	1	1	1
3-1	DB61-10164B	CASE-CLEANER FILTER	PP	2	2	2	2	2
3-2	DB74-10082A	DEODORIZING FILTER	POLYESTER/CARBON	1	1	1	1	1
3-3	DB74-10081A	CLEANER FILTER	POLYESTER/COTTON	1	1	1	1	1
4	DB63-00091A	COVER TERMINAL	ABS(V0)	1	1	1	1	1
5	DB92-00035A	ASS´Y FRONT PANEL	HIPS	1	1	1	1	1
6	DB93-00311A	ASS'Y PCB DISPLAY	ASS'Y	1	1	1	1	1
6-1	DB63-00115A	COVER DISPLAY	ABS(BLK)	1	1	1	1	1
7	DB94-00029B	ASS´Y TRAY DRAIN	ASS'Y	1	1	1	1	1
7-1	DB31-10153B	ASS´Y STEPING MOTOR	MP24S	1	1	1	1	1
7-2	DB66-00104A	BLADE-H	ABS	1	1	1	1	1
8	DB75-40087G	ASS´Y EVAP	PLATE1.2(5/8")	1	1	-	-	-
	DB75-40087H	ASS´Y EVAP	SLiT1.5(1/2")	-	-	1	1	1
9	DB67-30089E	SPACER EVAP	PVC	1	1	1	1	1
10	DB90-00140A	ASS´Y HOLDER MOTOR	ASS'Y	1	1	1	1	1
10-1	DB61-00209A	HOLDER MOTOR	PP(Vo)	1	1	1	1	1
10-2	DB65-10108A	CLIP EARTH WIRE	SECC	1	1	1	1	1
10-3	DB65-00039A	TERMINAL BLOCK ASS´Y	5P,25A	1	1	1	1	1
11	DB31-10151C	MOTOR FAN IN	IC-9430SKC7A	1	1	1	1	1
12	DB94-30162C	ASS´Y-C-F-FAN	ø95 x L	1	1	1	1	1
13	DB90-40135B	ASS´Y HOLDER BEARING	ASS'Y	1	1	1	1	1
13-1	DB94-40003A	RUBBER BEARING	CR	1	1	1	1	1
13-2	DB61-40244A	HOLDER BEARING	PP	1	1	1	1	1
13-3	DB94-40007A	BEARING	PG5	1	1	1	1	1
14	PD-T24A1R-00	ASS´Y MAIN PCB	PD-T24A1R-00	1	1	1	1	1
15	DB32-10008E	ASS´Y-TERMISTOR	103AT	1	1	1	1	1
16	DB61-10163A	CASE CONTROL	ABS(VO)	1	1	1	1	1
17	DB94-20037D	ASS´Y BACK BODY	HIPS	1	1	1	1	1
18	DB90-00163A	HOLDER PIPE	PP	1	1	1	1	1
19	DB70-10663A	PLATE HANGER	SGCC-M	1	1	1	1	1

6-2 Outdoor Unit

6-2-1 18K BTU

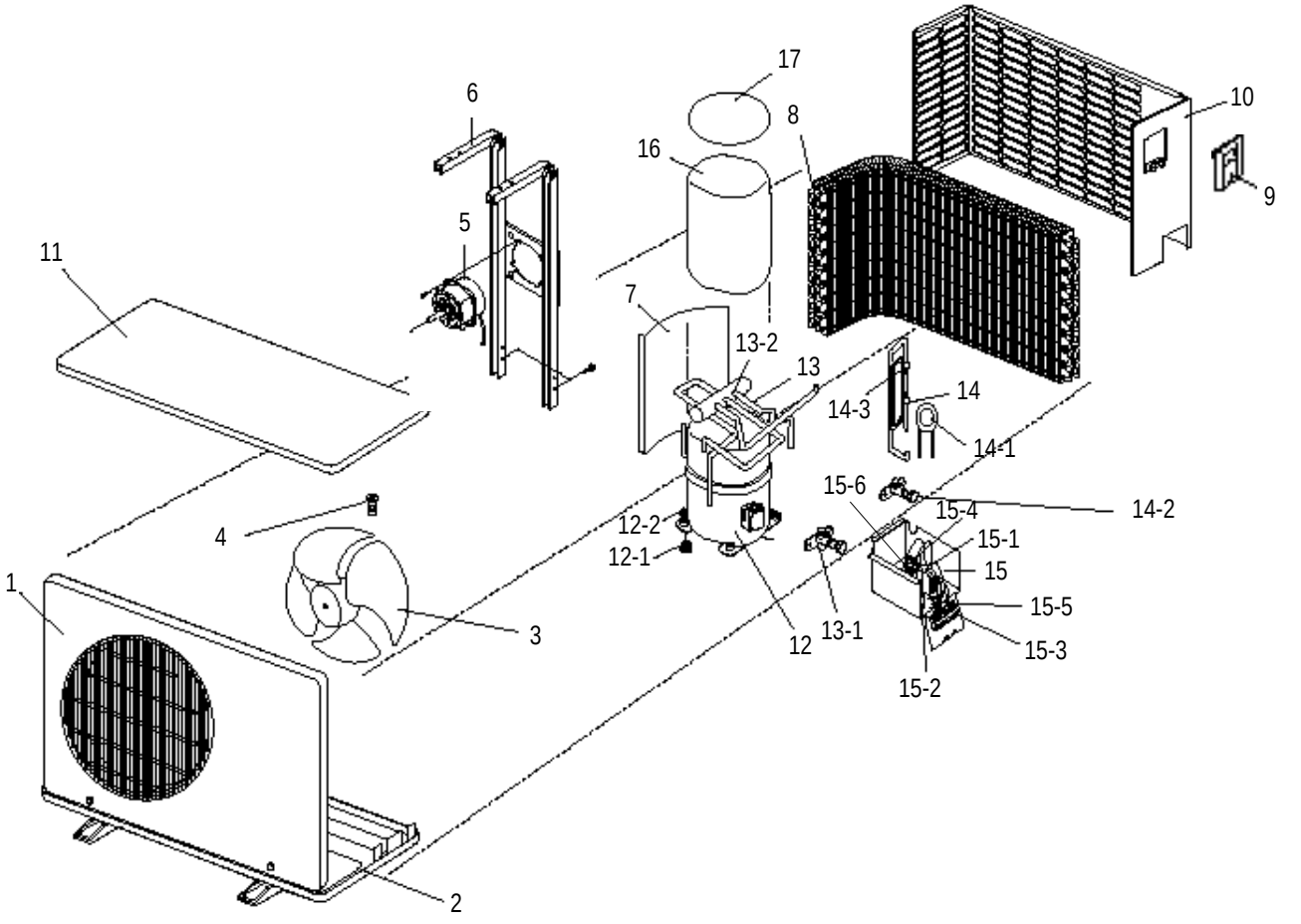




■ Parts List(18K)

No.	CODE NO	Description	Specification	Q'TY		
				UQT18A1RE UQT18A2RE SH18TA1	UQT18A1RB UQT18A2RB	UQ18A1RE UQ18A2RE SH18ZA1
1	DB90-00033A	ASS'Y-WELD FRONT	SC-90073T	1	1	1
2	DB90-20160C	ASS'Y-BASE OUT	SC-90073T	1	1	-
	DB90-20160D	ASS'Y-BASE OUT	SC-90073T	-	-	1
3	DB67-50063A	ASS'Y-FAN	AS+G/F20%	1	1	1
4	DB60-30020A	NET FLANGE	M6LF	1	1	1
5	DB31-00056C	MOTOR FAN OUT	ASS-030AVEB	1	-	1
	DB31-00056D	MOTOR FAN OUT	ASS-030ZTEC	-	1	-
6	DB61-20008C	BASE-MOTOR	SGCC-M	1	1	1
7	DB94-50034A	PARTITION	SGCC-M	1	1	1
8	DB75-30103E	ASS'Y-CONDENSER	ASS'Y	1	1	1
9	DB90-40176B	COVER-CONTROL	ABS(V5)	1	1	1
10	DB64-60172A	ASS'Y-CABI BACK	SC-90073T	1	1	1
11	DB90-40124A	TOP COVER	SC-90073T	1	1	1
12	DB95-10351C	COMPRESSOR	AWG5524EXC	1	-	-
	DB95-10351G	COMPRESSOR	AWG5520EXN	-	1	-
	48B180JV1EH	COMPRESSOR	48B180JV1EH	-	-	1
12-1	DB73-10008A	GROMMET ISOLATOR	EPDM	4	4	-
	DB73-10004A	GROMMET ISOLATOR	EPDM	-	-	3
12-2	DB60-30028A	NUT WASHER	M8	4	4	3
12-3	DB60-30018A	NUT FLANGE	M5	-	-	1
12-4	DB68-10165D	COVER TERMINAL	NORYL	-	-	1
13	DB99-10133A	ASS'Y-4WAY V/V	ASS'Y	1	1	-
	DB99-00018A	ASS'Y-4WAY V/V	ASS'Y	-	-	1
13-1	DB62-40022A	PACKED V/V 1/2"	10LT/MIN	1	1	1
13-2	DB62-40036A	4WAY V/V	CHV-0201	1	1	1
14	DB99-10136C	ASS'Y-CHECK V/V	ASS'Y	1	-	-
	DB99-10136D	ASS'Y-CHECK V/V	ASS'Y	-	1	-
	DB99-10136A	ASS'Y-CHECK V/V	ASS'Y	-	-	1
14-1	DB62-31800B	TUBE CAPI(C)	C1220T-0	1	-	1
	DB62-31800A	TUBE CAPI(C)	C1220T-0	-	1	-
14-2	DB62-40039B	PACKED V/V 1/4"	1/4 INCH	1	1	1
14-3	DB62-31802C	TUBE CAPI(H)	C1220T-0	1	-	-
	DB62-31102J	TUBE CAPI(H)	C1220T-0	-	1	-
	DB62-31802B	TUBE CAPI(H)	C1220T-0	-	-	1
15	DB93-00306B	ASS'Y CONTROL OUT	ASS'Y	1	-	-
	DB93-00306D	ASS'Y CONTROL OUT	ASS'Y	-	1	-
	DB93-00308A	ASS'Y CONTROL OUT	ASS'Y	-	-	1
15-1	DB34-90054A	SWITCH MAGNET	41NB21AL	1	-	-
	DB34-90054B	SWITCH MAGNET	41NB21AG	-	1	-
	DB34-90057C	SWITCH MAGNET	45CG20AL	-	-	1
15-2	2501-001194	CAPACITOR	35/450VAC	1	-	-
	2501-001218	CAPACITOR	25/450VAC	-	1	-
	2501-001163	CAPACITOR	40/450VAC	-	-	1
15-3	DB65-00040A	TERMINAL BLOCK	8P/20A	1	1	1
15-4	DB95-90026B	SPARK KILLER		1	1	1
15-5	3601-000236	FUSE	2A,250V	1	1	1
15-6	2501-001066	MOTOR CAPACITOR	2.5μF/450VAC	1	1	1
16	DB72-50622A	CLOTH SOUND	-	1	1	-
	DB72-50537A	CLOTH SOUND	-	-	-	1
17	DB72-50614A	CLOTH SOUND UP	-	1	1	-
	DB72-50544A	CLOTH SOUND UP	-	-	-	1
18-1	DB39-00121A	CONNECTOR POWER	3G,2.5mm^2	1	1	1
18-2	DB39-00171A	CONNECTOR WIRE	7G,1.00mm^2	1	1	1
18-3	DB67-20011A	DRAIN PLUG OUT	PP	1	1	1
18-4	DB63-10355C	CAP DRAIN	CR	1	1	1
18-5	DB60-30010A	NUT FLANGE 1/4"	C3771BD	2	2	2
18-6	DB60-30010C	NUT FLANGE 1/2"	C3771BD	2	2	2

6-2-2 24K BTU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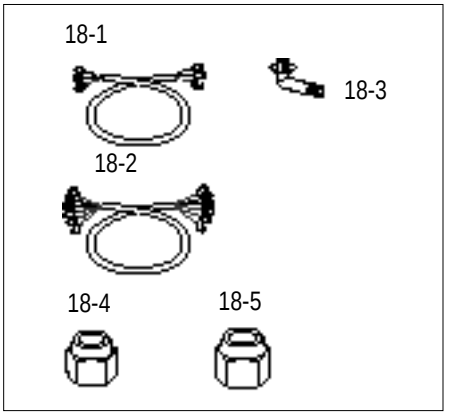
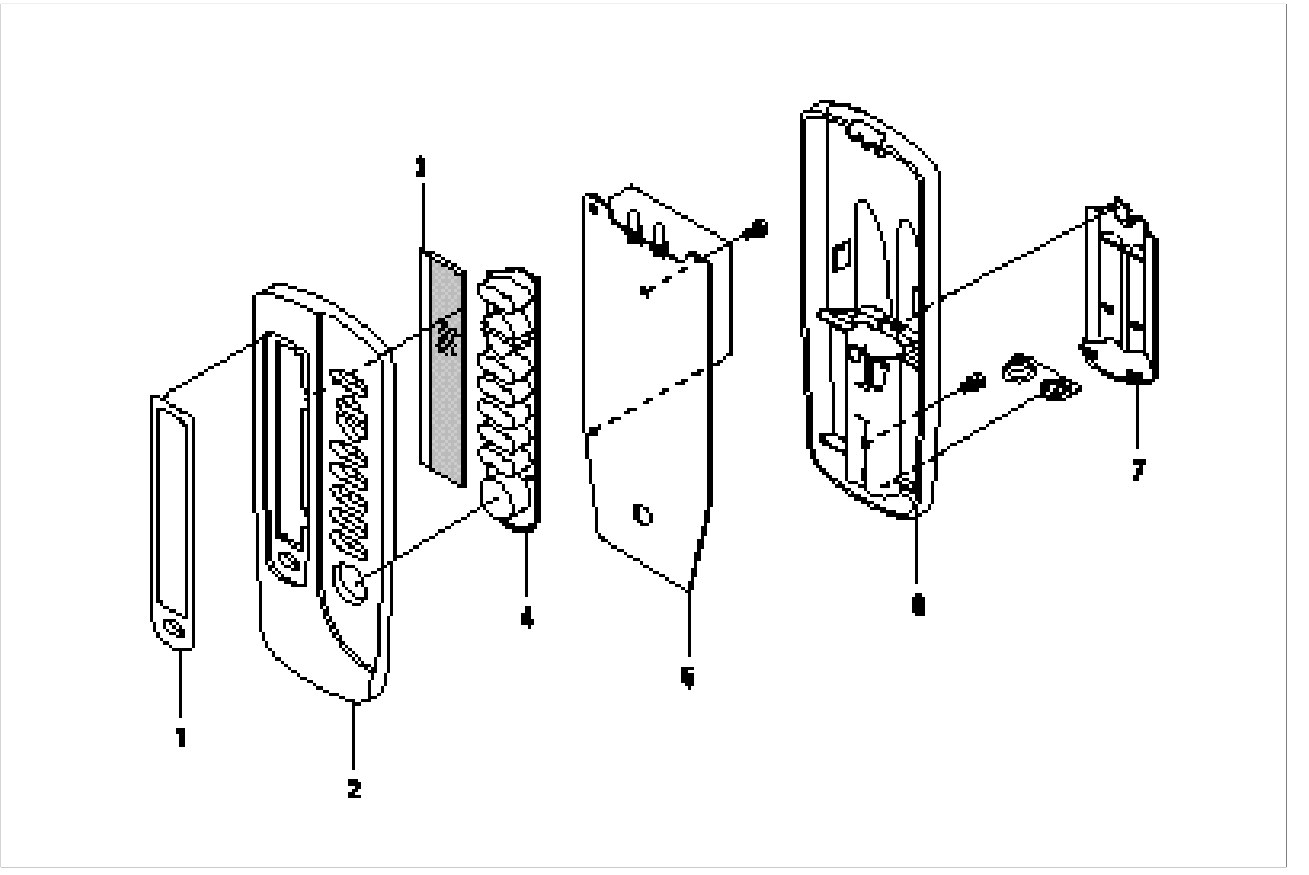

18-1
18-3
18-2
18-4
18-5

■ Parts List(24K)

No.	CODE NO	Description	Specification	Q'TY		Remark
				UQT24A1RE UQT24A2RE SH24TA1	UQT24A1RB UQT24A2RB	
1	DB90-10634A	ASS'Y WELD FRONT	SC-90073T	1	1	
2	DB90-20210A	ASS'Y-BASE OUT	SC-90073T	1	1	
3	DB67-50074A	ASS'Y-FAN	AS+G/F20%	1	1	
4	DB60-20020A	BOLT SPECIAL	M8 L25	1	1	
5	DB31-00027E	MOTOR FAN OUT	OSME-906SRC	1	-	
	DB31-00027F	"	OSM-906SRC	-	1	
6	DB95-20147A	ASS'Y-MOTOR B/K	SGCC-M	1	1	
7	DB94-50039C	PARTITION	SGCC-M	1	1	
8	DB75-30102F	ASS'Y-CONDENSER	ASS'Y	1	1	
9	DB90-40176B	COVER-CONTROL	ABS(V5)	1	1	
10	DB64-60160C	CABI SIDE OUT	SC-90073T	1	1	
11	DB90-10616A	TOP COVER	SC-90073T	1	1	
12	DB95-10351A	COMPRESSOR	AWG5532EXC	1	-	
	DB95-10351E	COMPRESSOR	AWG5528EXN	-	1	
12-1	DB73-10004A	GROMMET ISOLATOR	EPDM	4	4	
12-2	DB60-00028A	NUT WASHER	M8	4	4	
13	DB99-10135A	ASS'Y-4WAY V/V	ASS'Y	1	1	
13-1	DB62-40055F	PACKED V/V5/8"	20LT/MIN	1	1	
13-2	DB62-40036A	4WAY V/V	CHV-0201	1	1	
14	DB99-10138C	ASS'Y-CHECK V/V	ASS'Y	1	-	
	DB99-10138B	"	"	-	1	
14-1	DB62-31798C	TUBE CAPI(C)	C1220T-0	1	-	
	DB62-31798D	"	"	-	1	
14-2	DB62-40039C	PACKED V/V 1/4"	1/4 INCH	1	1	
14-3	DB62-31802F	TUBE CAPI(H)	C1220T-0	1	-	
	DB62-31802A	"	"	-	1	
15	DB93-00306A	ASS'Y CONTROL OUT	ASS'Y	1	-	
	DB93-00306C	ASS'Y CONTROL OUT	ASS'Y	-	1	
15-1	DB34-90054A	SWITCH MAGNET	41NB21AL	1	-	
	DB34-90054B	SWITCH MAGNET	41NB21AG	-	1	
15-2	2501-001076	CAPACITOR	45μFx450VAC	1	-	
	2501-001194	CAPACITOR	35μFx450VAC	-	1	
15-3	DB65-00040A	TERMINAL BLOCK	7P	1	1	
15-4	DB95-90026B	SPARK KILLER	-	1	1	
15-5	3601-000236	FUSE	2A,250V	1	1	
15-6	2501-000398	MOTOR CAPACITOR	4μF/450VAC	1	1	
16	DB72-50622A	CLOTH SOUND COMP	-	1	1	
17	DB72-50614A	CLOTH SOUND UP	-	1	1	
18-1	DB39-00121A	CONNECTOR POWER	3G,2.5mm^2	1	1	
18-2	DB39-00171A	CONNECTOR WIRE	7G,1.0mm^2	1	1	
18-3	DB67-20011A	DRAIN PLUG OUT	PP	1	1	
18-4	DB60-30010A	NUT FLANGE 1/4"	C3771BD	2	2	
18-5	DB60-30010D	NUT FLANGE 5/8"	C3771BD	2	2	

6-3 Remote Control & PCB Box

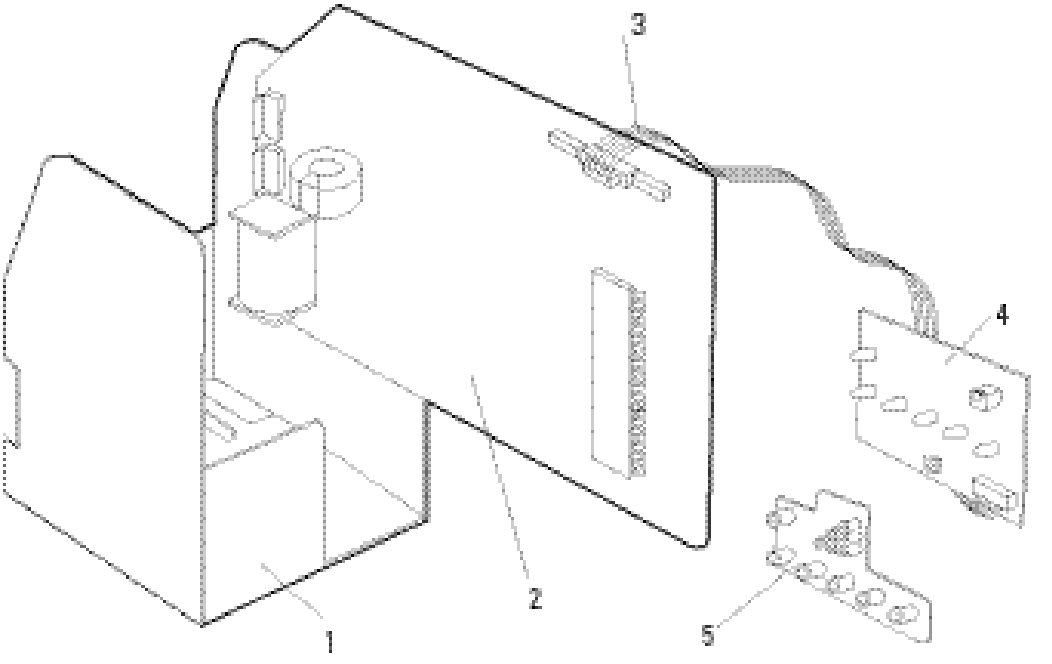
6-3-1 Remote Control (DB93-30073B)



■ Parts List

No	CODE NO	Description	Specification	Q'TY	Remark
1	DB64-00041B	INLAY LCD		1	
2	DB61-00070A	CASE TOP		1	
3	DB07-00005A	LCD		1	
4	DB73-00015A	KEY RUBBER		1	
5	ARC-406	ASS'Y PCB REMOCON		1	
6	DB61-00071A	CASE LOW		1	
7	DB61-00072A	BATTERY COVER		1	

6-3-2 PCB Box



■ Parts List

No	CODE NO	Description	Specification	Q'TY	Remark
1	PD-T24A1R-00	ASS'Y MAIN PCB	PD-T24AIR-00	1	
2	DB32-10008E	ASS'Y THERMISTOR	103AT 240/240	1	
3	DB93-00311A	ASS'Y PCB DISPLAY	ASS'Y	1	
4	DB39-00172A	CONNECTOR WIRE DISPVAY	AWG#26	1	

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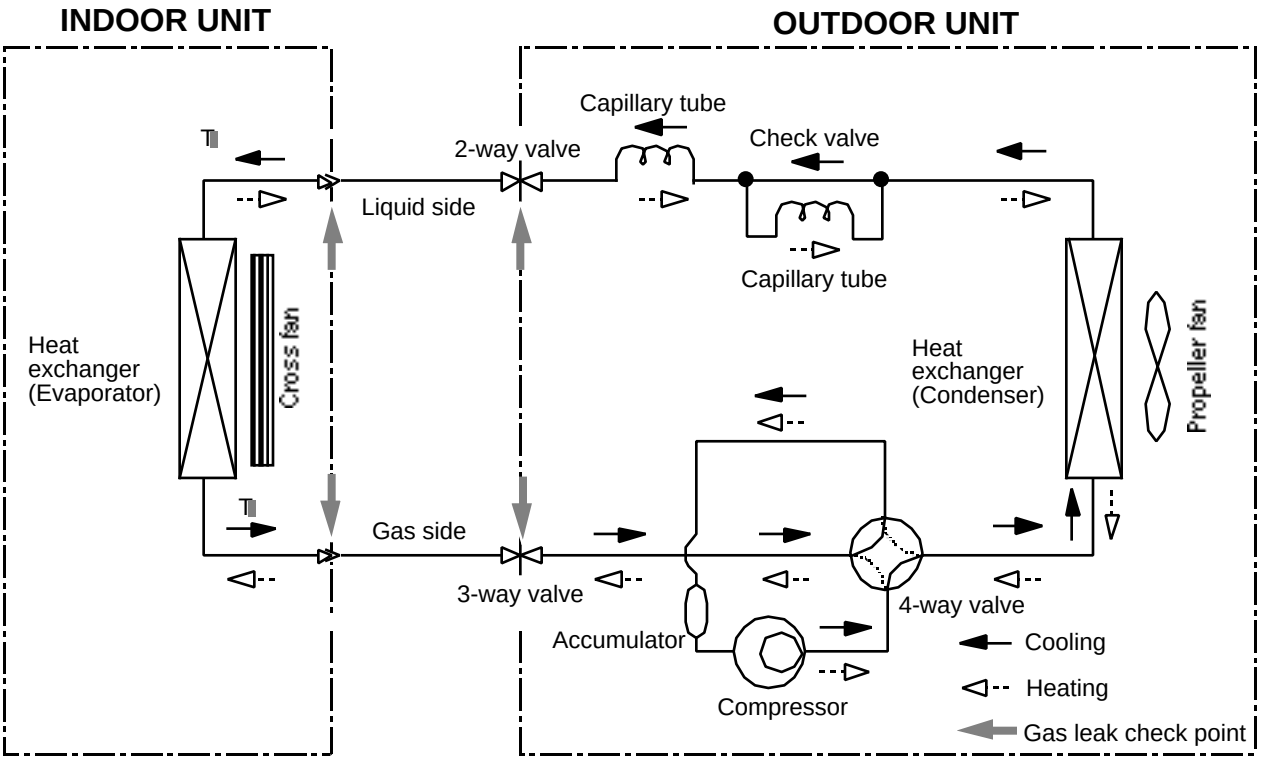
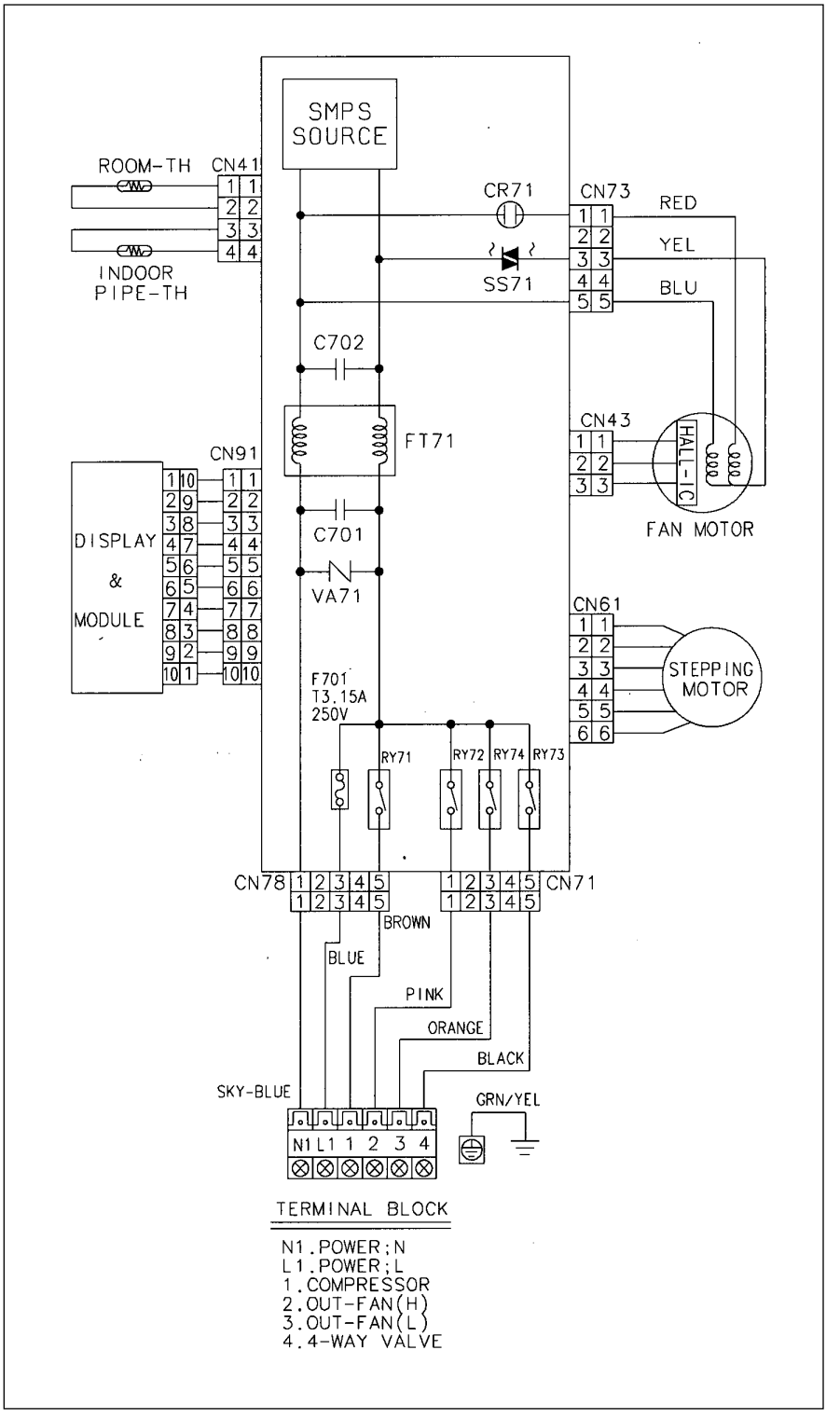
7. Block Diagrams

7-1 Refrigerating Cycle Block Diagram

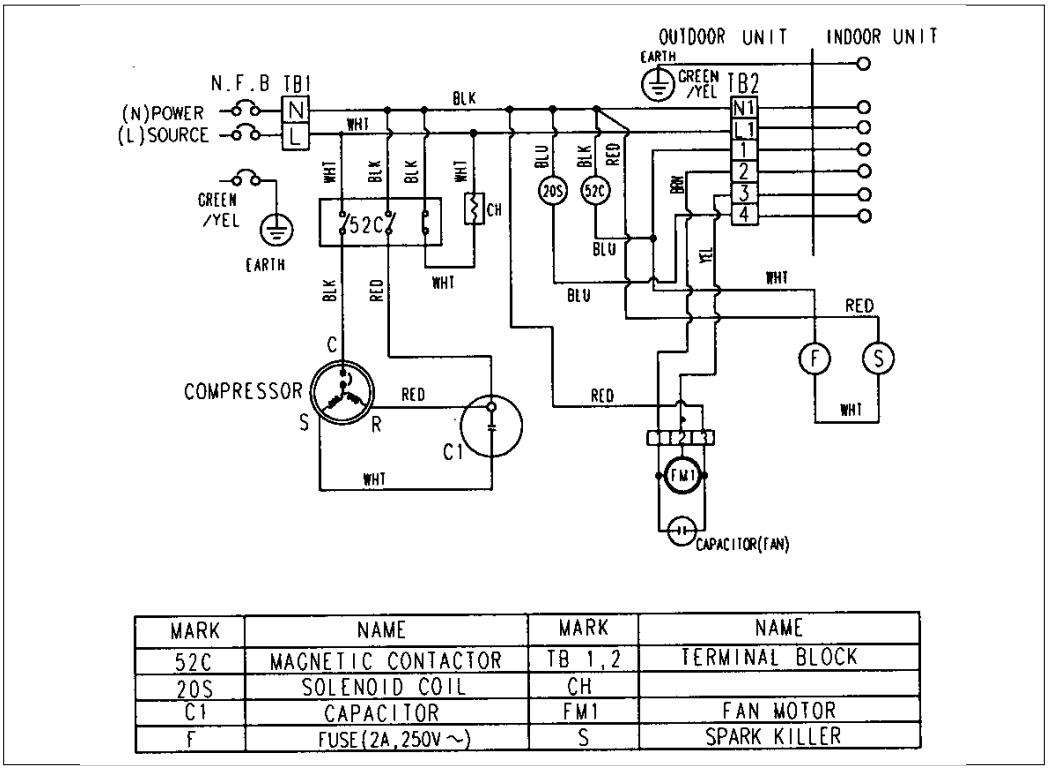


9. Wiring Diagrams

9-1 Indoor Unit



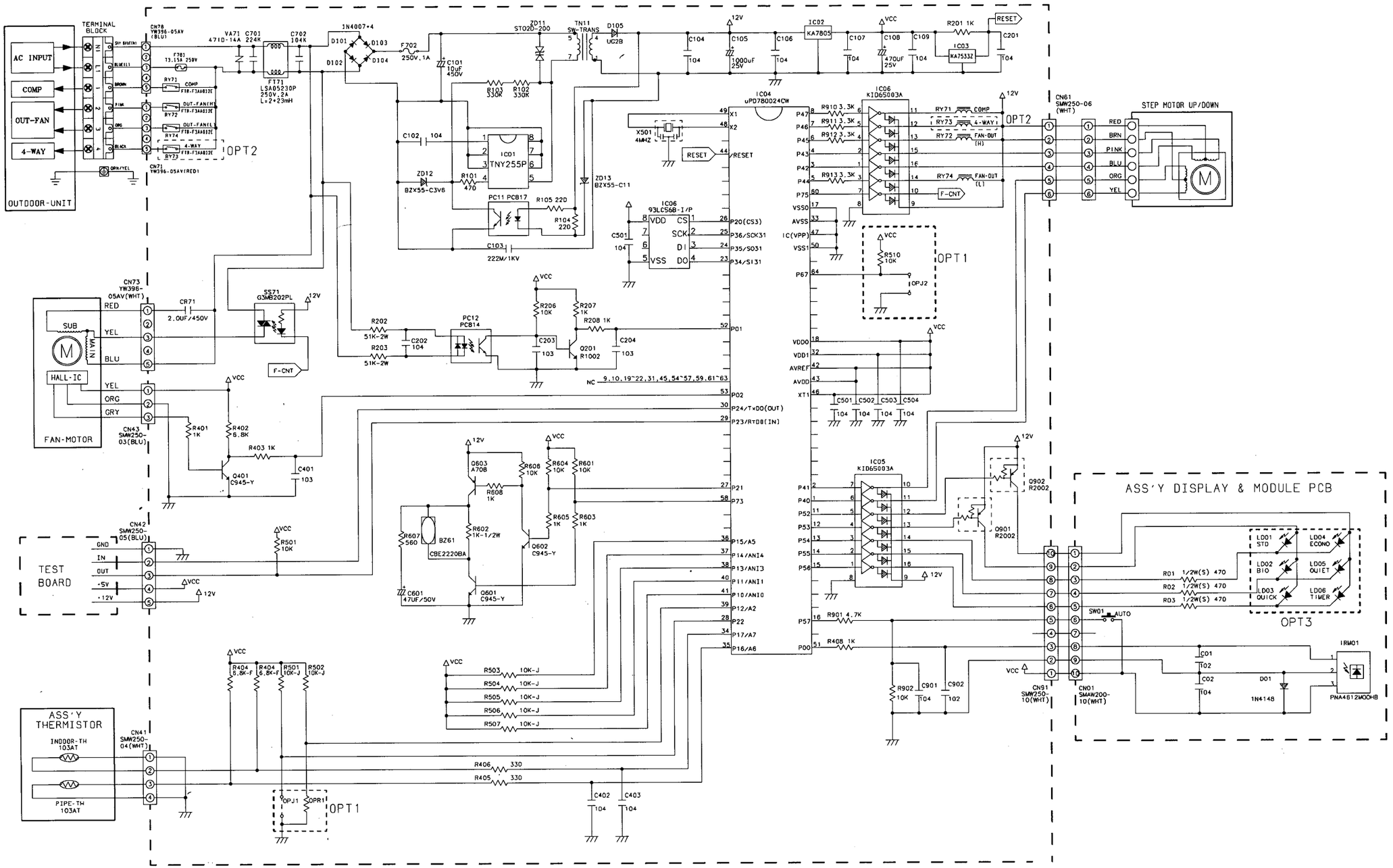
9-2 Outdoor Unit



MARK	NAME	MARK	NAME
52C	MAGNETIC CONTACTOR	TB 1,2	TERMINAL BLOCK
20S	SOLENOID COIL	CH	
C1	CAPACITOR	FM1	FAN MOTOR
F	FUSE(2A,250V~)	S	SPARK KILLER

10. Schematic Diagrams

10-1 Indoor Unit



UPDA TE LOG SHEET

Application date	Page	Part#	Note(Cause & Solution)	S/Bulletin#

Use this page to keep any special servicing information. (Service Bulletin, etc.)
If only parts number changes, Just change parts number directly on parts list.
And if you need more information, please see the service bulletin

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